

# THE CULTIVATOR:

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"TO IMPROVE THE SOIL AND THE MIND."

NOTICE.—The co-partnership heretofore existing between the subscribers, in the publication of the Cultivator, under the co-partnership name of "Jesse Buel & Co." is this day dissolved by mutual consent. All debts and liabilities and business of the co-partnership will be settled at the office of the Cultivator by LUTHER TUCKER, who will continue the business on his own account.

JESSE BUEL,  
LUTHER TUCKER.

## Fourteenth Annual Fair of the Am. Institute.

THIS association of individuals in the city of New-York, incorporated for purposes of the greatest national importance, and intended to advance the agricultural interest, and foster and protect domestic industry, holds its fourteenth annual meeting at New-York, on the 11th of October, and several succeeding days. It is not necessary here to refer to the extensive and beneficial agency which the Institute has already exerted by its annual exhibitions, by its numerous premiums, and by the encouragement it has afforded to the spirit of improvement, shown in our stock, our agricultural implements and our manufactured articles. The course of the Institute has been constantly onward. Each succeeding year has added to the interest of the Fair, and the number, variety, and importance of the animals and articles exhibited; and the Fair of the present year promises to far exceed any that has yet been held by the society. This may in part be attributed to the increased means of the Institute, and partly to the greater interest which the objects aimed at by the Institute receive from the public. The Institute is the recipient of that part of the legislative grant made in favor of agriculture, which would fall to the city of New-York, and thus most opportunely and fortunately for the public, its means of doing good are greatly increased. It will be seen from the extract which we give below, from the Circular of the Institute, of the new premiums which will this year be awarded, in addition to the former ones on cattle, sheep, horses, hogs, farm and garden products, and labor-saving machines, that the substantial interests are not overlooked or forgotten. The annual address, which is always by some distinguished individual, will this year be given by the Hon. REVERDY JOHNSON of Maryland. There can be little doubt that the Fair this year will be most gratifying and honorable to the advocates of American agriculture and industry.

1. For the best assortment of agricultural labor-saving machines exhibited by any one person or persons—a gold medal.
2. For the most complete assortment of horticultural machines from any one person or persons—a gold medal.
3. For the best plow—a gold medal or silver cup. Second best—silver medal. Third best—a diploma.
4. For the best silk reel, an improvement on those before exhibited—a gold medal.
5. For the best twisting and spinning machine, an improvement on any heretofore exhibited—a gold medal.
6. For the best silk loom, an improvement, as above—a gold medal. Second best—a silver medal.
7. For the best stocking loom for families, cheap, not liable to get out of order, and simple in its operations—an improvement on those before exhibited—a gold medal.
8. For the best butter quantity not less than 100 pounds—a gold medal.
9. For the best cheese, not less than 100 pounds—a gold medal.
10. A premium for the best assortment of American Tropical fruits, flowers and vegetables.
11. A premium for vases, urns and artificial fountains.
12. For the best treatise on silk, for the young culturist, from the planting of the mulberry to the completion of the reeling of the silk—fifty dollars and a gold medal.
13. For the best practical treatise on fruit and garden vegetables—a gold medal.
14. For the best design for an ornamental garden, with explanations—a gold medal.
15. For the best assortment of specimens of fancy wools—a gold medal.
16. For the most complete assortment of specimens of American hardware, the Managers will also award a gold medal.

## National Society of Agriculture.

It gives us great pleasure to state that our friend SOLON ROBINSON, Esq., the zealous and able promoter of industry, and the original projector of a National Agricultural Society, has safely arrived at Washington, and that on the 4th of September a meeting was held in the Hall of the Patent Office, at which the incipient steps for the formation of such a society were taken. We perceive from a report of the proceedings kindly furnished us, that the numbers in attendance were very respectable, and actuated by the best spirit. The meeting was called to order by the Hon. H. L. ELLSWORTH, than whom there is not in the country a more enlightened and decided friend of agricultural improvement. Mr. ROBINSON was called to the chair, and briefly explained the objects of the meeting, after which the following resolution, submitted by Mr. Ellsworth, was discussed and unanimously adopted:

"Resolved, That the interests of agriculture imperiously require the co-operation of its friends throughout the Union, to concentrate their efforts by the formation of a National Society, for the promotion of national industry, and to 'elevate the standing and character of the cultivators of American soil.'"

Resolutions were then adopted, that a meeting of the friends of such a society "be held at the city of Washington, on the second Wednesday of the ensuing session of Congress," and that one gentleman from the District of Columbia, and one from each State and Territory, be a committee to draft a constitution for such society. The following gentlemen were named by the chairman as the committee:

Hon. Henry L. Ellsworth, District of Columbia; Hon. James M. Garnett, Virginia; Hon. Chilton Allen, Kentucky; Hon. Oliver H. Smith, Indiana; Hon. Thomas S. Hind, Illinois; Hon. Lewis F. Lind, Missouri; Hon. Francis H. Gordon, Tennessee; M. W. Phillips, Esq. Mississippi; Hon. Dixon H. Lewis, Alabama; Hon. Alex. Mouton, Louisiana; Hon. Wm. S. Fulton, Arkansas; Hon. Augustus C. Dodge, Iowa; Gov. James D. Doty, Wisconsin; Hon. William Woodbridge, Michigan; William Neff, Esq. Ohio; Wm. P. Kinzer, Esq. Pennsylvania; Edmund D. Morris, Esq. New-Jersey; Dr. James W. Thompson, Delaware; Hon. John S. Skinner, Maryland; Hon. Edmund Deberry, North Carolina; Hon. Francis W. Pickens, South Carolina; Hon. Wm. C. Dawson, Georgia; Gov. Call, Florida; Caleb N. Bement, Esq., New-York; Solomon W. Jewett, Esq. Vermont; Hon. Levi Woodbury, New Hampshire; Hon. George Evans, Maine; B. V. French, Esq. Massachusetts; William C. Chapin, Esq. Rhode Island; Hon. Thomas B. Osborn, Connecticut.

We here gladly insert the remarks of Mr. ROBINSON, accompanying and explaining the report of the proceedings, in preference to any thing we could add ourselves in enforcing the propriety and necessity of such an organization. It is indeed probable that before this sheet goes to the press, Mr. ROBINSON will have been among us; and we cannot doubt his reception among his agricultural friends in the east and north, will be such as to convince him that they will not be behind those of any section of the Union, in a cordial support to his great undertaking.

"By this, my friends, you will see that the ball is now fairly in motion. I hope I have been fortunate enough in making a selection upon the spur of the moment, of the gentlemen named as a committee, to secure the services of such as will act promptly for the good of this great cause. I hope they will interchange views with one another, and at the day appointed for the meeting to organize the Society, I hope they will come together, and have the satisfaction of meeting the largest body of the real friends of agricultural improvement ever collected together.

I most earnestly hope that every individual friend of a National Agricultural Society, whom bounteous nature has provided with the means, will attend the first meeting. I hope every Agricultural Society in the Union will send special delegates to the National Society.

I have and shall recommend that the price of membership be fixed very low, as the great and grand object is to enlist a great number in this bond of brotherhood, and by concentrated effort of mind more than with money, to produce a happy effect upon society.

A large meeting at the organization is highly important, to give tone and effect to the measure, and to encourage one another. It is probable also that steps will then be taken to found an institution where a course of scientific and agricultural lectures will be delivered every winter, free to every farmer's son or daughter in the United States.

Many of my friends have expressed a wish that the first meeting might be held in the present autumn. But it is thought by those with whom I have advised here, that the time of a session of Congress would be the most interesting. In fact, every free-man of this country ought to have the opportunity at least once in his life, of visiting the Capitol of his country at such a time. There is then enough to be seen and learned, sufficient to repay all the trouble and expense of such a visit.

The Patent Office alone is the greatest and best museum of useful curiosities in the Union.

The Hall of Manufactures, 273 feet long, will be filled with ten thousand curious and wonderful things. It is already worthy of great interest, and before next winter will be much more so.

No doubt manufacturers and mechanics will take advantage of the time of the meeting of the Friends of a National Society of Agriculture, to make exhibitions that will be sufficient to in-

duce great attention, and from which a mass of useful information will be gathered.

I cannot but look upon the first meeting of the friends of a National Agricultural Society as an epoch in the history of my country that will long be remembered.

I hope all my correspondents to whom I have promised information upon this subject, will take this address as particularly addressed to them. And I hope that every paper in the United States that is friendly to that interest which is the base of all others, will make known to its readers what is now doing for the promotion and organization of this society. I am confident that every agricultural paper will afford the information to its readers; and I hope in particular, that every editor of such papers will attend the first meeting.

From Washington, I shall continue my tour through the eastern states, and I hope to have a personal interview with many of my agricultural friends.

But above all things, let all remember "now is the time" for them to say that "something can, something must, something shall be done," to advance the interest of agriculture in the United States.

Be assured that I remain your earnest agricultural friend,  
SOLON ROBINSON

Washington City, Sept. 6, 1841.

## The Hessian Fly.

We make the following extract from a letter written by an intelligent and scientific correspondent in Pennsylvania. The fact stated is a very important one, and will doubtless lead to important results. Miss MORRIS deserves the highest praise for the perseverance and success with which she has pursued her investigations into the habits of this most formidable foe of the wheat crop:

"I have just been shown a letter from M. MORRIS, in which she says she has watched the progress of the Hessian fly from the time of depositing its ova on the berry, through all its transformations, until it became a perfect insect, and has had this season numerous stalks of wheat growing with the larvae in them. If this is the truth, (and there are probably many witnesses of the fact,) which we have no reason to doubt, it places her opinions beyond controversy. It also goes a great way to establish mine as to the identity of the *C. destructor*, with the *C. tritici*. The only remaining difficulty is, that the egg is not always hatched in the berry, but sometimes in the stalk."

## Ag. Association of the State of Louisiana.

UNDER this title we are happy to perceive by the Baton Rouge Gazette, an association or society was organized at that place in June, which we cannot doubt will be eminently prosperous and beneficial. Officers were appointed, and by-laws adopted, and such arrangements made as will ensure its activity and efficiency. Louisiana possesses the elements of wealth in its agricultural productions to an eminent degree, as is proved in their present imperfect development, and the vast field for improvement which the society will occupy, will call out the talent and energy of the able and public spirited individuals engaged in the great cause of agricultural reform. The Gazette states that there was present at the organization a large number of the most respectable and intelligent planters, who evinced a deep interest in the subject, and an ardent desire that the undertaking might be successful. James Buhler, President; Joseph Menard, Treasurer; A. Adams, Recording Secretary; and J. Hueston, Cor. Secretary.

## Oneida County Agricultural Society.

At a meeting of the officers of this society, held at Rome, arrangements were made for an exhibition and fair on the 3d Wednesday in October, and from the spirit manifested it is evident Oneida is intending this year to outdo all her former doings in the cause of agriculture. A list of premiums to be awarded, embracing horses and mules, cattle, sheep, swine, dairy, grain and root crops, sugar, silk, domestic goods manufactured in families, with a variety of discretionary premiums, was made out, amounting to about ninety in number, and intended to distribute among the farmers of that flourishing county the sum of \$700.

We were glad to see that the resolutions adopted at the meeting called the attention of the claimants for premiums to the requirement of the act of the legislature, that such claimants should deliver in writing as accurate a description of the processes in preparing the soil, the expense and product of the crops, or the feeding and fattening of animals as may be, and we hope that all the state societies will keep this requisition in view, as a compliance with it is essential to carrying out the intentions of the act for the improvement of agriculture.

Committees were appointed on the different classes of premiums, and such measures adopted as seemed best calculated to insure to the county the benefit which can scarcely fail to result from the organization and action of the society.

## Crops of 1841.\*

The season is now so far advanced, and so many of the principal crops have been either secured, or are so far advanced that a tolerably correct estimate may be formed of their amount, that the means of giving a better view of the whole than we have yet seen offered, seems possible. To do this, we have collected data from all parts of the United States, and from the most careful comparison we have been able to make, have arrived at the following results.

The wheat crop may be considered the great grain crop of this country, as its effect, independent of its value as an article of food at home, is more extensively felt in the trade and monetary matters of the country, than any other. This crop will not equal that of 1840. In Indiana, Illinois, and Michigan, there is a decided increase; on this point all agree, and the advance is variously estimated from one-fourth to one-third. The blight which so destroyed the crop of 1840 in a large portion of these States, was not felt this year; the growth and the berry have proved good, and as a greater quantity of land was sown than in the previous year, the largest rate of increase may not far exceed the truth. Ohio and Kentucky are supposed to have nearly held their own, but in almost every other direction there has been such a falling off, that the increased crop of the North Western States has been more than neutralized. In Tennessee, in Virginia, in the Carolinas, in Maryland, Delaware and Pennsylvania, and particularly in New-York, the deficiency in the wheat crop is great. It is true, the berry is almost uniformly good, but this will not compensate the loss which the severe winter, the backward spring, the fly and the worm, has caused. The difference in the sum total of the wheat crop of 1840 and 1841, we do not consider great, but believe what difference exists, is against 1841. The wheat crop of New-England, is nearly or quite an average one, but the difference either way, cannot be so great as to affect the general result materially. There was not a great amount of wheat in the country when the wheat harvest commenced. A large portion of that which found its way to Buffalo, from the West, did not reach the seaboard; and after allowing for what diverged to the Canadas, it is clear much must have been stopped and consumed in the transit, a result hardly possible had Western New-York contained its usual supply of old wheat. The price of wheat will, however, always be more or less influenced by the state of the other grain crops, and we think an examination of these will show that wheat can hardly fail to command fair, though not exorbitant rates.

Rye, out of the New-England States, is not grown extensively for bread, but cultivated for the pernicious use of distillation, consequently any trifling variation (and the difference from the average this year, all advances would seem to show, is but trifling) cannot materially affect the result so far as bread crops are concerned.

Barley will not be a medium crop. New-York raises more of this grain than all the rest of the United States, and the crop in the best barley counties will be lighter than in 1840. This arises in part from two causes. One was the unfavorable state of the weather in the spring months for such crops, cold and very wet, and this followed by extreme dryness, which materially injured the young grain. The other cause is to be found in the fact, that farmers in the greatest barley producing districts, have become convinced that a course of spring cropping exclusively, is most injurious, filling the soil with all kinds of foul stuff, and that summer fallows, with winter wheat, must, as a cleaning crop, in connection with hoed ones, be resorted to. The effect of this increasing belief has been, that less barley was sown in 1841 than usual; and although the quality is unusually fine, the quantity will not equal that of former years.

Indian corn is the most important grain for bread, next to wheat, of this country, and there is none, perhaps, of more extensive domestic use and utility. Whatever affects this crop, therefore, may be considered as more immediately affecting prices, and influencing the prosperity of the country, than causes operating on any other crop, wheat excepted. Up to the middle of July the corn crop of the United States never looked finer, and there was nothing particularly unfavorable until August. Corn, a native of a warm climate, and throwing out vigorous roots and to a great depth, is less injured by heat, and bears a drouth better than almost any other cultivated plant; consequently, although some complaints were heard of extreme dryness, and partial failures might have been anticipated, still it was not until about the middle of August that serious apprehensions of extensive failures were justified. Severe drouth operates on corn by preventing the setting of

\* The above notices of the crops of 1841, were prepared for the September No. of the Cultivator, but crowded out by the press of matter relating to the State Agricultural Society. An examination of the opinions advanced, and the reasons on which they are founded, in consequence of this delay, has caused no change in the opinions advanced respecting the several crops, (unless a slight modification in favor of the potato crop may be such, owing to the reviving influence of showers the fore part of September,) while on the contrary, all additional intelligence goes to prove their correctness. The comparatively small quantities of flour that have reached the seaboard since the harvest, is proof that the old wheat was nearly exhausted. The new comes down slowly, but now that the labors of sowing are over, the wheat will be thrashed and forwarded rapidly. The quality of the wheat crop of 1841 has never been exceeded, and that will materially compensate for any trifling deficiency in the quantity.

ears on many of the stalks, by drying the silks prematurely, and thus preventing the formation of grain on ears already set, and it is evident, that corn has already, throughout large districts of our country, suffered severely in both these ways. From Virginia to Canada, the most distressing accounts of the severity of the drouth reach us, and the Western States are by no means exempt. In many places the corn is irrecoverably lost, and the farmers, for want of pasture, are cutting it up and feeding it to their animals. Corn, therefore, notwithstanding the beautiful and flattering appearance of the crop at the close of July, must now be considered in a state which renders it certain an average crop cannot be produced, and in all calculations respecting grain and its prices, this fact must be kept steadily in view. Late planted corn has suffered the most, as the roots had not sufficiently penetrated the earth, and the great heat demanded a more plentiful supply of moisture for the plants, than under such circumstances could be afforded.

There is but one of the cultivated roots which requires notice in any discussion relating to the food of man, and that is the ready made bread of so large a part of mankind, the potato. The quantity used as human food in the States is enormous, and as they are plenty or otherwise, so will their influence be felt in the grain market. We think, from all we have been able to learn, that of all the crops that have suffered from the drouth, the potato has felt it the most severely. So disastrous has been the effect on this crop, that perhaps we should not be wrong if we state the falling off from the crop of last year in this State at one-third, and some consider it equal to one-half. But few roots have set, and those must, of necessity, be small, for though in ordinary seasons, these roots grow much during September, yet rains now would be of little avail, the tops and tubers both being so parched and dried.

We have come, then, to these conclusions, that the wheat crop of the United States is not an average one; that rye is about the average yield; that barley is a short crop; that corn must be below the average; and that potatoes approach nearer to what may be called a total failure than has ever been known in the country. The reasons for these opinions we have assigned; those interested will judge of their correctness, and draw their inferences accordingly. Of want there can be no fear, for extravagant prices no pretence, but a fair remunerating price for his products, an advance on those of the last year, may be confidently anticipated by the farmer.

## Proper Improvement of Land.

It always gives us great pleasure to record any facts which go to show the great advantage to be derived from properly cultivating land. There is no truth in American agriculture, we think, more certain, than that as a whole we cultivate too much land for either the improvement of our soils, or the prosperity of our pockets. On this point there is a marked difference between the best farmers abroad, and those of our own country. Here the money made from the farm, if not wanted at once for the payment of debts, goes to purchase more land—there the annual profits are far the greater part of them immediately applied to the improvement of the soil; and this fact accounts in a great measure for the acknowledged average superiority of their crops over ours. The United States have the finest soils in the world; by good husbandry they can be made the most productive; but this will not be until the farmer ceases to desire the possession of all the land that adjoins him. There has been an article going the rounds of the papers, written by a Connecticut farmer, stating the productions and expenses of two farms of 25, and 100 acres, the first well cultivated, and the last in the ordinary manner; and the result is what any one might anticipate, viz. a decided advantage in the summing up, in favor of the farm of 25 acres. Every well cultivated farmer's garden, is an annual proof that he would derive greater profit from a smaller farm fully improved, than from a large one gone over in the common mode. The immense product that may be drawn from a small quantity of thoroughly tilled land is as yet scarcely known in this country; instances, however, are occasionally given that show what might be done, were more correct opinions and a better practice, on this subject, to prevail. As a case in point we abridge from the *Ithaca Journal* an account of the varieties of articles cultivated in a garden of that place.

The piece of ground was 100 by 200 feet, but a large part of it, (or 5,000 feet of the 20,000,) is occupied by buildings, yards, &c.; on the remainder is grown, strawberry; many varieties, and in abundance; raspberries, 4 kinds; gooseberries 12 or 14 kinds; currants, 3 varieties; filberts, 4 kinds; 2 early apple trees; 8 pear trees, 4 kinds; 8 cherry trees, 4 kinds; 2 apricots; 5 plum trees, best kinds; 10 peach trees; 4 quince trees; 14 grape vines; 2 asparagus beds, with rhubarb, sea kale, and a variety of sweet and medicinal plants. Most of these fruits produce abundantly, and some of them much more than is required by the family. In the department of flowering shrubs and bulbous roots, are a dozen varieties of roses, lilacs, altheas, snowballs, almonds, dogwood, honey suckles, peonies, tulips, crocus, crown imperial, narcissus, and of annual flowers more than 50 varieties. The ground appropriated to trees, shrubs and flowers is not crowded, but there is room for many more. In the vegetable department was grown lettuce, radishes, cress, parsnips, carrots, vegetable

oysters, beets, onions, summer squashes, cucumbers, musk and water melons, egg plant, okre, cabbage, broccoli, cauliflower, celery, &c. &c.

This is what we call occupying the whole ground, and in this case there was doubtless much pleasure as well profit derived from this small piece of land. There is no surer way to keep up kind feelings among neighbors than an exchange of the thousand civilities such gardens enable the proprietor to bestow; and of this one may be certain, the children who are accustomed to the enjoyment of fruit and flowers at home, to their cultivation and protection, are never a pest in the gardens of their neighbors; never stealing or plundering the choicest fruits, never destroying or mutilating the most valuable flowers.

In every point of view then, the thorough cultivator is a gainer; in his comforts, in his pleasures, and in his profits. Let those who covet large farms, think of these things; let them examine facts, and decide accordingly. The capabilities of our lands can never be fully understood, or the amount of products we might offer for sale known, until a more perfect system of farming shall be made common.

## Annual Meeting of the Royal Ag. Society.

The meeting of this society, as we stated last month, was held this year at Liverpool, in July, and occupied an entire week. It showed in every respect a vast improvement on any previous one, in the numbers and interest of the members and spectators, the number of animals and implements exhibited, the amount of premiums awarded, and the enthusiasm and good feeling that prevailed. Perhaps few instances can be given better illustrating the efficiency of associated effort, than that of the English Royal Agricultural Society. The number of its members is about 5,000, embracing men of all ranks and professions, but principally composed of the substantial farmers of the Kingdom.

The show of cattle, of all the varieties of English cattle, horses, sheep, hogs, &c. was splendid, and the implements on the ground were almost innumerable, and adapted to all the numerous purposes of agriculture.

In the speeches made at the dinner of the society, reported for the Magazine, we find the following statement by the President of the Society respecting some of the most prominent scientific men in England, who are actively engaged in the promotion of agriculture:—Dr. Daubeny, Professor of Agriculture at Oxford; Dr. Buckland of the same University; Prof. Henslow of Cambridge; Prof. Johnson of Durham University; and Prof. Playfair of Edinburgh, "who had translated the work of the first chemist of the age, (Dr. Liebig,) for the use of the English agriculturist."

Among the "prizes for essays for the year 1840," we find the following one, which will appear somewhat singular to the American laborer, who is little accustomed to consult any thing but taste in his selection of food:

"1. Food for Laborers.—Ten sovereigns, or a piece of plate of that value, for the best directions to enable laborers to prepare wholesome, nutritious, and palatable food, in the most economical and easy manner,—to Mrs. Gardiner of Mitcham."

An able report was made by Prof. Sewell on the recent epidemic which has made such destruction in cattle throughout the country. The report was formed on about 600 hundred communications from different parts of the country. As we can hardly expect to escape the epidemic in this country, the Professor's report, which will appear in the *Journal of the Society*, will be looked for with some interest by our cattle growers. Like the cholera, the cattle epidemic has been several years in traversing Europe from east to west, and the past season has proved fatal to thousands of cattle in England; and at the present time, is committing fearful ravages among the cattle of Ireland.

As an instance of the number and variety of implements presented for exhibition, we may mention that one firm alone (J. & R. Ransome, of Ipswich,) had on the ground 36 kinds of plows, adapted to the various soils and purposes of agriculture; and of other agricultural implements the number and variety did not fall behind that of plows. Such shows are one of the best schools for the agricultural mechanic, and as such are prized and frequented by the implement maker of England.

## Census of Agriculture.

We have been waiting with some impatience for the complete returns of the late Agricultural Census of the United States, for the purpose of laying them before our readers. Such returns have not yet been made, and partial or incorrect reports can be of little value. We find in many of our exchange papers what purports to be a full table of the returns, with the exception of some four or five states or territories, and we had some thoughts of transferring it to the Cultivator, but on looking it over, so many errors were perceptible, that we have concluded it would be better to wait the final and authentic returns, than to encumber our pages with erroneous statistics. To mention one or two items in the table alluded to. The number of sheep in New York, is stated at 5,381,225, and the pounds of wool produced at 4,012,144. In Ohio the number of sheep is put at 3,396,431, and the pounds of wool grown at 3,076,783. There are other errors, but these are sufficient to show that such returns need correction before they can be depended upon.



## Correspondence, Inquiries, &amp;c.

## Oil from Corn.

In reference to a remark of ours in a former number of the Cultivator, (page 133,) Hon. H. S. ELLSWORTH, of Washington city, says:—

"I have been endeavoring to collect all the information I could on that point, with reference to the West, where corn is very cheap. I believe it will undoubtedly repay cost and trouble to grind and ferment the maize, take off the oil, and then feed the mash to animals."

Mr. E. asks for further information on this subject, and we will, if possible, procure such an account of the process of saving the oil, from the individual who made that to which we alluded, as shall be satisfactory. In the mean time, if others have experimented on the subject, we should be pleased to hear from them. We think the suggestion of Mr. Ellsworth a reasonable one, and if the oil can be separated without the development of the alcohol, it would be a great point gained for the west. Some valuable hints on the formation of the oils, during the chemical changes of fermentation, may be found in Liebig's Organic Chemistry.

In answer to Mr. Ellsworth's inquiry, "whether there is, to our knowledge, any mills for making oil from broom corn seed in the country?" we reply, we know of none such, nor have we ever heard that an attempt has been made to produce oil from that seed. That it contains oil cannot be doubted, whether in sufficient quantities to pay the cost of manufacture could easily be ascertained in those districts of New-England where the plant is extensively grown.

## Farming in Tennessee.

We make the following extracts from a letter received from a gentleman in Maury county, Tenn. enclosing some inquiries, &c.:

"I have 350 acres of land, 130 of which are under cultivation—divided into fields of about 20 acres each. Balance in heavy woodland. Well watered; a running stream flowing through the middle of the plantation. Corn and cotton raised on it chiefly for the last 30 years, and no manure or clover. Thirty to fifty bushels of corn to the acre considered a good crop. Land, limestone; soil light and liable to wash; clay subsoil. I put the last year, 60 acres in corn, 30 in clover, 15 in oats, and 12 in wheat. \* \* \* A neighbor of mine, raised, as an experiment a few years ago, by manuring, 80 bushels of corn from an acre of land. \* \* \* I have no meadow, use mules for labor, land timbered with poplar, whiteoak, hickory, walnut, &c. No use has been made of manure; stables and barn yard full of it. \* \* \* Can we not farm it in Tennessee so as to make it a source of profit? B. M."

Unquestionably you can; your description of the land, timber, &c. is proof; and the reason why it has not been more successful, may be traced to the two causes mentioned, the continued culture of cotton, and the neglect of manure. If B. M. will discard the culture of cotton, altogether; procure some good Durhams and Berkshires; use clover liberally with wheat, oats, and other small grains suitable to the region; make and use all the manure possible, not allowing it to accumulate in the yards and stables; plow deep, and introduce a rotation of crops adapted to his circumstances; he will not fail of making money by farming. "B. M." asks whether he shall not clear more land. We say no; not until every acre he has cleared is so improved as to give him 70 or 80 bushels of corn. The great fault with the farmer, is cultivating more land than he can cultivate well. Corn, wheat, clover, cattle, hogs, sheep, all good, and a farm so managed and tilled that no labor is lost, and ample crops are certain, should be the aim of the owner of the soil. Two truths must be impressed on the mind of every farmer: without manures no fertility; without stock no manures. Secure these two things, and with such a soil as B. M. has, a man can do more than "gain a mere livelihood" by tilling the soil.

## Ashes and Meadow Lands.

Our friend, "W. J. D." of Petersburg, (Va.) has transmitted us the following queries, on the use of ashes, and the general management of meadow land:

"At what season of the year, are the leached ashes or other manures applied in meadows, and how, and in what quantities per acre?"

Where ashes, or other manures, are applied directly to meadows, the spring is found the best time, as the effect of the application is more immediately felt. The quantity is regulated by the amount of ashes or manure available, or the sterility of the land. We have used from 30 to 90 bushels of ashes per acre, and in all cases with the best effect. We have applied it to plow lands by spreading and plowing in; to meadow lands by spreading it equally as possible in the spring. Wet lands are benefited by draining previous to its use, but is valuable in correcting the acidity of even such. It is not common now, however, on well cultivated farms to apply the ashes or manures directly to the grass crop. It is given to corn and roots, followed by grains and grasses, and the meadows as well as tilled lands follow the course of rotation.

"Are your meadows ever grazed in the autumn after sowing?"

They are either mown for the second crop, or are grazed; at least this is the usual practice. Some farmers turn their animals into their meadows as soon as they are mowed; but this is a very bad practice, as the roots should have time to recover from the check they receive from the cropping, and this is best done by the undisturbed growth of the aftermath. In no case should meadows be grazed close, and no animal should

be admitted into them in the spring. Our experience would show, that unless pressing necessity exists, it is better to never allow meadows to be grazed, as the second growth preserves the roots from the effects of winter, and in their decay, constitute a valuable top-dressing for the coming crop.

"Are your meadows ever coultured to open the soil?"

Meadows which it is inconvenient to subject to a course of rotation, have been found to be greatly benefited, by a dressing of ashes or manure, followed by a thorough harrowing. In such cases it is an excellent plan to sow new grass seeds, which is in fact a renewal of the meadow.

"How long do they usually remain before they are cultivated, and what are the indications of a want of cultivation?"

No definite time can be given for allowing meadows to lie in grass; every thing is depending on circumstances, such as the condition and quality of the soil, the kind of grasses in cultivation, &c. Where a rotation is used, as always should be where practicable, the length of the course will determine the period the meadow lies in grass. The indications of a want of renewal in a meadow, are the appearance of weeds not suitable for hay, the coating of the earth with moss or lichen, the disappearance of the valuable grasses and then the succession by inferior or less nutritive ones, the general lightness of the crop of hay made, or in short, anything which proves a deterioration of the plants or the soil cultivated, shows that the meadow would be benefited by plowing up, manuring, and new seeding.

"With whom could I open a correspondence with the best prospect of obtaining a few pure Durham heifers?"

Gentleman having such animals to dispose of, may address "W. J. D." Petersburg, (Va.) postage paid.

## Prospects of Agriculture in Georgia—New Grass.

From the letter of a correspondent at Sparta, Ga. we make the following extract. It is gratifying to observe the brightening prospects of the farmer throughout our whole country; of the spread of knowledge on agricultural topics; and the consequent spirit of inquiry and improvement manifested. The grass alluded to by our correspondent is probably one of the stoloniferous varieties, which are propagated by the roots or joints, and which have within a few years been extensively used for turfing over and binding down the drifting sands that were encroaching on parts of England and Ireland. All grasses it is believed produce their seeds, but some, and this class in particular, sparsely and rarely.

"We are beginning to see the necessity of raising less cotton, and more grain and stock, and making more manure. We are writhing under the scourge which we have brought upon ourselves, by permitting Kentucky to furnish us with pork, mules, and horses; and what is stranger still, we who have been great enemies to the grasses, and have made it our business to kill all that came in our way, now begin to believe that their cultivation is essential to our prosperity. You may ask what has produced this revolution in opinion and practice? I with pleasure inform you that it is the circulation of the Cultivator and Farmers' Register."

"We, apparently by the merest accident, have, in my opinion, one of the finest and best grazing grasses in the world. It is called *Bernuda grass*, from the fact of its being brought from that island. A gentleman in the southern part of the state brought it from there as a yard grass; it found its way into the interior of the state for that purpose; all animals are fond of it, and it is believed to contain as much or more nutriment than any other grass. We are beginning to cultivate it. It grows well on poor land, resembles what is called the wire grass of this region, takes root at every joint as that grass does, until the land becomes covered and a thick turf formed. It will grow on the poorest worn out clay, and eventually reclaim it, for when the turf is once formed, nothing is lost to the land by washing. It has to be propagated from the root or sprig, as it has no seed. When once planted it remains for all time, unless shaded or disturbed by the plow or hoe. The grazing or treading of stock has no effect upon it after turf is well formed, the more exposed to the sun the greater its luxuriance, and mixed with white clover, which grows well with it, it affords good pasture for ten months in the year. The herbage is at all times very thick and tender. Some have objected to it, because of the difficulty of destroying it; but one of my neighbors has fine cotton growing where two years since this grass was as finely set as I ever saw it. It will be the salvation of the worn out lands of Georgia. We have a flourishing *Piemont's Club* in this county, the annual meeting of which and the fair, is held on the 1st Monday in December. Premiums will be awarded on stock and domestic manufactures, and there will be an address by a member. The thing takes well and will do good. Next year we shall award premiums on crops, our organization being too recent to do it. Crops here are very good. Farmers talk of making from 40 to 75 bushels of corn on good land without manure; and on much worn land, that never had a shovel full of manure, where the rain has been plenty, they speak of 25 bushels; this is great cropping for Georgia."

## Tan Bark—Inquiry.

"MESSRS. EDITORS—Will you, or some of your correspondents inform a young farmer whether *tan bark* is valuable as a manure—and if it be, what is the best mode of applying it? I have several hundred cart loads of *tan bark*, much of which has been lying in heaps for twenty years or more. Can it be rendered valuable without lime? If lime is to be used, how should the preparation be made? If valuable, will it be better to apply it on a clayey or sandy soil? and what would be its value as a litter for stables or cow yards, compared with straw or leaves? F. MASON."

Albemarle County, Va.

Tan bark, to be of value as a manure, requires decomposition, when it has the same effect as any other vegetable matter. Like fine chips from the wood yard, its influence at first can be only mechanical, but as decay commences, its value as a manure is felt, and as the decomposition is gradual, its beneficial effects will remain for years. There is usually more or less acid in the bark or wood of trees, and the addition of lime would doubtless be beneficial, though the quantity to be used, if thoroughly mixed with the bark,

need not be great. Ashes would answer as well as lime, or indeed any other alkaline substance. The best way of using the lime would be to make a compost, or place the bark and lime in layers, which when stirred, would effectually incorporate both. Bark, on account of the mechanical effect it has in keeping the soil loose, as well as its effect as a manure, is best on clayey ground, as it renders light sandy soils still more loose in their texture. As a litter for the pig pen, cow yard, or stables, it would be valuable; acting as an absorbent of fluids and salts that might otherwise be lost, and having its decomposition hastened, and its acid properties corrected at the same time. We have noticed a case reported in one of the eastern states in which tan bark was used in this way:—There was a strong clay subsoil, and the soil itself tenacious. Bark was spread on this to the depth of three or four inches, and then turned in with a plow, cutting to the depth of twelve or fourteen inches. Then another similar dressing of bark was laid on, and turned under in the same manner. The crops have been excellent since, and the texture of the soil much improved. It is evident, however, that the immediate value of bark, as a manure, must depend on its state of decomposition.

## Chess.

Our correspondent, E. LINK, Esq. Greenville, (Tenn.) requests our opinion on the following statement of facts, which we take from his letter to us:—

"I have a meadow that twelve months ago was pure timothy, with the exception of a few bushels of red clover. Early in July of last year, before it was mown, we had a flood memorable in the annals of this county, that swept over it, leaving much of it covered with mud, resembling the bottom of a mill pond. It being in a valley through which a small branch sometimes passed irregularly, I cut a ditch on the subsiding of the water, and by fall a greener and more beautiful piece of meadow I have never seen. But what was my surprise this year to find the whole meadow one mass of chess or chess, as well where the water flowed over for a short time, as where it stood two or three weeks. \* \* \* Such cases I find not uncommon here. Many meadows that were inundated last year, have produced little else than chess this. A far more than usual quantity is this year in our wheat. Indeed, in some crops that was sown from the very imperfect seed generally raised here last year, chess seems to have striven not unsuccessfully for the mastery."

REMARKS.—The chess in the meadows was unquestionably produced from seeds brought down from the cultivated fields higher up on the stream, and the rich mud in which they were deposited gave them a start when germinated which caused them to quickly overpower the timothy and clover of the field, just as chess sown with grass seeds in wheat will soon overtop and master them. The fact stated that the wheat crop last year was "very imperfect," is a key to the whole. The chess grown with this imperfect or impure wheat crop, furnished not only the seed that covered the meadows of the valley, but that which gained the mastery of the wheat crop of this year.

Mr. L. adds the following queries:—

"What is the best method of securing a large crop of pumpkins from frost or rotting until used? Is buckwheat a hard crop upon land, and does it make a valuable meal for stock?"

Pumpkins to be preserved require to be kept dry and at a temperature above freezing. We have kept them in layers with straw, under cover, better than any other way we have tried; indeed there is no difficulty in keeping them any desirable time, if you do not let them touch each other; keep them dry and safe from frost.

Buckwheat does not reduce or exhaust land faster than any other crop which is permitted to ripen its seeds; perhaps not so much as some. We have never used buckwheat meal for feeding any other stock than hogs; for these it is excellent, and would doubtless prove so for other animals.

## Purchase of Farms, Books, &amp;c.

"MESSRS. GAYLORD & TUCKER—I take the liberty of asking you a few questions, which I hope you will consider as sufficiently connected with your great object to answer. A READER."

"1st. Where would you advise a young man who has a small capital of say \$3,000, and who intends to be a farmer, to lay it out?"

If we intended to have a large family of boys, and wished to provide a farm for each, we would go to the west, and purchase accordingly; if our expectations on this point were moderate, we would expend the money in the purchase of a small but good farm in the vicinity of a certain market for farm products, cultivate it well, and thoroughly, and when this was done, convert the profits into more land if wished, since there will always be land to be bought by those able to pay for it.

"2d. In what part of the country can cultivated farms be purchased the cheapest?"

In the interior, doubtless, and in the northern states there will be no great variation when the location, soil, and facilities for market are taken into consideration. We have been favorably impressed with the inland or upper counties of Virginia, so far as climate and soil is concerned, but the northern laborer may meet with some things not quite so pleasant to him in that region.

"3d. What works on agriculture do you think best for a young farmer to have or read?"

Of European practical works, "The British Husbandry," 2 vols. and Prof. "Low's Practical Agriculture," are perhaps equal to any. Of those devoted to the science of agriculture, "Liebig's Organic Chemistry," and "Chaptal's Agricultural Chemistry," particularly the American editions, are superior to any others. Few volumes on agriculture have yet been published.

ed in this country. "Fessenden's Complete Farmer," "Buel's Farmers' Companion," "American Husbandry," and the "Practical Farmer," are the best known. Periodicals have, as yet, been more depended upon for the circulation of agricultural information than costlier works, and these are to be found in abundance.

#### Egyptian Barley and Skinless Oats.

One of our subscribers at Greenville, C. H. (S. C.) in a late letter, says:—

"I have raised during two seasons, the Egyptian barley (*Hordeum coeleste*), which I think a very fine grain and well adapted to our latitude, 34° 45', but it requires rich, dry, light soil and good tillage. Skinless oats, I think begin to degenerate; the seed was this year very small, but the straw strong and high. Probably the land was too rich."

#### The Crops in New-Jersey.

We make the following extract from a letter from D. L. Dodge, Esq. dated Cedar Brook, Bloomfield, (N. J.) Sept. 2:

"Through the whole season up to the present time, we have had a superabundance of rain, except a few weeks in July, so much as to cause delay in getting in the spring crops. We have had a large crop of hay, but more foul weeds interspersed than common. Winter wheat, generally a fair crop and quality. Siberian spring wheat, was promising about the last of June, but afterwards nearly destroyed by blight. Rye promised early a large yield, but did not fill well; perhaps two-thirds of a crop will be realized. Oats that indicated a heavy crop, were struck with rust while in the blossom, and will probably be light in quantity and quality. Corn, buckwheat, potatoes and roots now promise more than an average yield. Some of our meadows, notwithstanding they have been fed, would now yield a tolerable crop of roven if again mowed. From inquiries, I am led to believe that the abundance of rain with which we have been favored, has not extended far to the west or north of us, and that hay and some other crops, except in this vicinity, will be very light."

#### Foot Rot in Sheep.

"J. H. M." of Delaware county, says:

"I placed a flock of about 150 sheep, as fine as the country could produce, upon a farm near by, and vigorous and healthy, and quite fleshy for the season, (April last.) The sheep having come into my possession the fall before, I cannot account for their previous treatment. A few weeks since we were surprised to find more than half suffering severely with the Hoof or Foot Rot, and unless some cure be provided, the whole will be ruined. Will you be so good as to insert the best intelligence in your possession, on the causes and remedy of this dreadful malady?"

We regret that the inquiry of J. H. M. did not reach us in season for our last number, as in diseases of that nature, promptness in cure is very necessary. We shall however, reply to his queries and first as to the cause. The excellent treatise on sheep by Mr. Youatt, says:

"This disease (the foot rot) is the consequence of soft and marshy pasture. The mountain or the down sheep—the sheep in whose walk there is no pochy ground, if he is not actually exposed to infection by means of the virus, knows nothing at all about it; it is in the yielding soil of the low country that all the mischief is done. It is sheep that have been brought from upland to lowland or but soft meadows or pastures are more particularly subject to it."

Blacklock, in his valuable work on sheep, says:

"The finest and richest old pastures and lawns are particularly subject to this disease: soft, marshy, and luxuriant meadows are equally so; and it is sometimes found in light, soft or sandy districts. In the first of these it is perhaps most prevalent in a moist season, and in the latter in a dry one; in short, it exists to a greater or less extent in every situation which has a tendency to increase the growth of the hoofs, without wearing them away, and more especially when they are kept soft by moisture. Another variety of foot rot is produced by the friction of long grass between the hoofs, but is mostly confined to hill sheep, when first pastured on low land districts. The rubbing of the grass frets the skin in the cleft of the hoof, the gland in that situation swells, becomes enlarged, suppurates, and in no long time the animal unable to stand on its feet, is compelled to rest upon its knees. This kind of disease is more easily remedied than the former, and does not cause so much suffering to the sheep."

As to the cure of Foot Rot, the first thing is to remove the sheep to clean dry pastures, and where the above causes of diseases will not act; all the diseased sheep are to be separated from the healthy ones, as it is considered infectious, and unless this precaution is taken, usually spreads with great rapidity. Blacklock says:

"When foot rot has fairly commenced, pare the hoof from the affected part, and trim away any ragged portions, wash the foot with soap and water, and place the animal in a situation where as few irritating things as possible will be in the way of the tender surface, and give a purgative. If not properly attended to, the supuration soon terminates in mortification. Cleanliness, in every stage and variety of the foot rot is of the first importance. Many corrosive preparations are recommended for the cure of this disease, but I have decided objections to one and all of them. When the foot is clean, endeavor to keep it so by frequent applications of soap and water, and if ulcers or fungous flesh appears, treat the foot with the following preparation—wash the foot once or twice a day with a solution of sulphate of copper, (made by dissolving two or three drams of blue vitriol in an English pint of soft water,) and carefully covered over with a pledget of fine tow, spread with lard or any simple ointment, by which means, conjoined with cleanliness, a cure will usually be accomplished."

Youatt says.

"The first and fundamental thing is to cut away every portion of horn that is in the slightest degree separated from the parts beneath it. A small sharp pointed curve knife, or a small drawing knife will be the best instrument to effect this."

The foot is then to be thoroughly cleaned, unhealthy granulations cut down with scissors or a knife, and then the foot is to be washed in a solution of chloride of lime in the proportion of one pound of the chloride to a gallon of water. This will remove the fetor, and check the tendency to sloughing and mortification. The muriate or butter of antimony may then, by means of a little stick and tow, be applied to every denuded part, lightly where the surface has a healthy appearance and more severely where fungous granulations have been

cut off. So far as these foot cases are concerned, this supersedes all other caustic and other applications. If a considerable portion of the horn of the foot, particularly the sole is removed, the foot may be bound up with tow secured by tape, and the sheep placed in dry straw, or if turned to the field always to one very dry. Close attention, and frequent examinations are required, and if kept clean and dry, a cure will be usually effected. Such, in substance are the directions of Mr. Youatt. In the same work will be found numerous instances where the disease proved infectious, and hence with justness the necessity and propriety of keeping the diseased from the sound sheep is inferred.

#### Green Corn Fodder for Horses.

"What is your opinion of Indian corn in its green state, cut up with the stalk and used as fodder for horses? do you think it nutritious? Some here recommend it highly; others say horses will thrive on it. I think it acts too freely on the bowels. I should like to see some extended remarks by some of your correspondents on the best manner of treating work and traveling horses. Elizabethtown, N. C. W. B."

All plants which abound in juices, if fed to animals without the mixture of other and dryer food, is apt to produce a loosening effect on the bowels. This is the case with beets, carrots, turneps, potatoes, &c. and hence it is found necessary where horses or cattle are fed on these, to give with them a quantity of dry hay. Very green corn would require such an addition, if used extensively for horses, but with this no injury could ensue. There can be no doubt as to the nutritive qualities of corn fodder. But to possess this quality in the greatest extent, the juices should be fully elaborated, as they contain the most saccharine matter, which seems to be essential to the full value of the plant. This time is when the corn is pretty generally glazed, and if cut up at this period, cut in a chaff machine and fed at once, or dried and stored for winter fodder and then cut for use, the stalks of corn will be found most nutritious and valuable. Where corn meal is to be fed to animals, the cob should always be ground with the grain, and there are few kinds of food on which animals will thrive faster, than the stalks and leaves made into chaff, and mixed with corn and cob meal.

Will some of our correspondents, qualified by their acquaintance with that noble animal, the horse, reply to the last part of our correspondent's inquiry?

#### "Book Farming, Farming Books, and Farming in General."

Under this title, a writer who signs himself Timothy Oldschool, has in a late number of the Alabama Republican Pilot, in a happy style of caustic humor, shown up at considerable length the absurdity of those who object to the manifest improvement of agriculture going on, because owing to books or agricultural papers, and hence condemned as book farming. We can make room for this extract only:

"These Book Farmers brag about their immense crops, their splendid cattle, their daily improvements, and so on. These are all such vain boasts, that we would not be fools enough to believe them if we were witness to them ourselves. But if what they say about improved stocks being so superior to the common ones is true, why not improve their own? What if it does take 30 or 100 years to make them equal to the imported breeds? Shall we be so unpatric as to be dependent on foreigners for things we can in time raise ourselves? We should be completely free of all foreign influence. Very true, some may say that by availing ourselves of their labors it will enable us to be independent of them fifty or a hundred years earlier than we otherwise would be; yet still we ought to improve on our own breeds, and be independent of all others."

"The butcher houses of London say that within the last fifty years the average weight of animals brought to that market has increased one-third; and those of Boston assert that within the last twelve years, the average increase of weight in animals slaughtered there, has been from ten to twelve per cent. This, however, is like all other assertions of the Book Farmers; if we admit it, we acknowledge the possibility that book farming is doing some good; the only way, therefore, is to assert that this alleged increase of weight is all a fabrication."

#### Manufacture of Manures.

Our correspondent "G. W." of Richmond, will perceive that his former inquiries have been replied to in the September number of the Cultivator. We now proceed to his present ones. He says:

"I find that 20 gallons of urine is sufficient to saturate 600 lbs. of plaster; I wish to know whether this quantity of plaster will not take up more salts than will be afforded by the 20 gallons. If so, how much more?"

"By adding a larger quantity of urine and stirring the whole together, will the plaster take up the salts, &c. of the fluid. If so, will the residue be water which I may draw off or evaporate? It is a great object with me to give the plaster the strongest possible preparation in order to save transportation."

"What quantity of any one of these agents (gypsum, chloride of Calcium, sulphuric or muriatic acid, and super-phosphate of lime (as quoted from Liebig) will suffice to fix the ammonia of 30 gallons of putrid urine?"

"I think I am making successfully the 'Alkaline vegetative Powder' of Madame Vebert Dubouli, but I wish to ask, does the lime used in the preparation prevent the escape of the ammonia?"

Our limited chemical knowledge does not enable us to answer the inquiries of our correspondent satisfactorily, and as they are important, we copy them in the hope they will receive attention of some of our practical chemists. The preparation of such manures is of great consequence to the farmer, and the best methods, those which ensure the greatest combination of fertilizing ingredients, should be adopted. There can be little doubt, we think, that 500 lbs. of plaster will combine with and retain for the use of the soil or plants, the salts of more than twenty gallons of urine. This could easily be tested by experiment. If a quantity of the mass once saturated with urine be dried at a mode-

rate temperate, and then again wet with the putrid urine and stirred up fully, permitted no escape of ammonia, (a fact known at once by the penetrating odor of that substance,) it would be certain that the highest point of combination or saturation had not been reached. In making an experiment with larger quantities of urine as suggested in the second query, evaporating the urine would be preferable to drawing it off, as in the latter case some of the uncombined salts would be lost, which would be left in the process of evaporation.

We have no means of accurately determining the points alluded to in G. W.'s last queries. Chaplaj, Davy, and Liebig simply assert the fact that the substances named neutralize the ammonia of animal matter, urine, &c. but say nothing as to quantities. The odor emitted is probably the surest test of the neutralization or absorption of the ammonia, as this substance is one which cannot pass freely into the atmosphere without detection. The whole science of the manufacture of manures is yet in its infancy, new and useful discoveries are almost daily making, and while science must direct and lead in such inquiries, much is depending on carefully conducted experiments in testing the utility of such discoveries. In this course, we trust our correspondent will persevere, carefully noting and recording his various operations and their results

#### Large Calf.

Mr. SAMUEL W. BARTLETT, of East Windsor, (Ct.) has a thorough bred Durham Short Horn bull calf, that when four months and eighteen days old, weighed 525 pounds, having gained 345 pounds in the last one hundred and nine days, or a fraction over three pounds per day.

#### Culture of Hemp.

We shall be gratified to receive an answer to the following inquiries, made by "A Subscriber," at Griggsville, Illinois, from some of our readers in Kentucky:

"What kind of a soil is best for hemp—the best time to plant, and how done—how much seed to an acre—when is it fit to cut—what process does it have to go through from the time that it is fit to cut, to get it ready for market—and how much does it produce to the acre?"

#### More Large Pigs.

We make the following extract from a letter from Mr. SAMUEL DENISON, of Floyd, Oneida county, N. Y., who says he has been for twenty years making efforts to improve his breed of swine:

"I have a sow crossed with the Leicestershire and our common improved breed of white hogs, three years old last spring; long bodied, short thin haired, fine in bone, and easy to keep; her first litter of pigs came the last of April, and were wintered over, and killed the next autumn, and weighed from 335 to almost 400; her next spring's litter, from a Berkshire boar, came the 4th of March; I fattened and killed six, between Christmas and New Years, a few days short of ten months old; their average weight, dressed, 285 pounds and some ounces; the heaviest 288 pounds. The pigs I am going to give you the weight of, or a part of them, came the 1st March last, seven in number, sired by our improved common breed white boar; one of the number I keep for a boar; the other six I feed, not however, with the expectation of competing with Dr. Martin. You will see by my manner of feeding, that I keep a dairy, and make butter; my pigs I fed with buttermilk and sour milk from six weeks old, the time I took them off to wean, until that began to fail; the latter part of July; as the milk began to fail, I added to it corn, soaked or boiled in water, and nothing more nor less. Two of the pigs I weighed at six months old—one weighed 245 pounds, the other 231 pounds; the other five not much lighter. The boar is for sale, and I shall have pigs to sell in the spring."

The following is from "J. W." Goshen, Columbiana county, Ohio:

"Henry Hinchman, a near neighbor of mine, has an uncommon fine sow, improved from the common stock of hogs, and has raised several litters of pigs from her and a full blooded Berkshire boar, for which he has been getting great prices, one of which he sold to Thomas Delzel that was pigged the 25th of 3rd month, 1840; at two months old it weighed 84 pounds; at three months weighed 112 pounds, and at six months weighed 262 pounds; and it is supposed that at this time he would weigh near 700. I am not possessed with a thorough knowledge of the manner of feeding, though I believe he was principally fed on corn and the slops of the house, with some bran or meal."

#### Berkshire Pigs.

Mr. WM. ANDERSON, of Ann Arbor, Michigan, thinks Dr. Martin's "Bernice," whose portrait was published in the August No., was indebted to the Berkshire cross for most of her excellence, as she possesses the characteristics of that breed in a high degree. Mr. A. also thinks there is a great difference in the Berkshires, and that those with "long nose and nearly straight face, long neck, a middling good shoulder, long back, light ham," &c. should be avoided, while those only should be selected, which "have short fine heads, dishing faces, short necks, deep thick shoulders, broad backs, heavy hams, extending down to hock joint, and broad when viewed from behind, long round barrels, and wide in the chest." These, he says, "will keep fat on grass, and will make more pork for the amount of food consumed than any other breed in the United States." Mr. A. has now on hand six litters of full blood pigs, from large and choice sows, and from a boar "five feet ten inches long from end of nose to root of tail, girth behind the shoulders five feet three inches, and weighing over 550 pounds, in grass fed order," which he will be glad to dispose of for \$20 per pair.

EARLY POTATOES.—The editor of the New Haven Farm Gazette received on the 6th of July a mess of new potatoes from Mr. J. Walton. They are called the egg potato, and were brought from England by Mr. W. They are not great bearers, but are early matured. The Gazette says—"the sample brought to us were from seed planted the 20th of March; they are perfectly ripe, and on being cooked, were as mealy as the best Vermont blues we ever saw."



**Farm Houses.**

We think there are few points of husbandry in the effect of bad management and want of calculation, so generally apparent among farmers, as in the position, arrangement, and construction of their dwelling houses. Comfort and utility is too often sacrificed to show, and beauty of design and neatness of execution overlooked, where they ought to be most apparent. There can be as much good taste shown in the selection of a position, and in the construction of a farm house, as in that of a palace, and there can be no good reason why it should not here be exercised.

The position of a farm house is of great consequence, and should be determined with particular reference to conveniences, salubrity, and appearance. The whole ground should be examined before the choice is made. The facilities of procuring fuel; of securing a plentiful supply of good water; of having an easily accessible means of ingress and egress to and from the premises; of the manner in which the productions of the farm must be moved, such as hay and grain, and the manure returned to the fields; all these things must be well-looked at before the place for the farm building is fixed upon. It would be obviously improper to build on the highest part of the farm, or on some distant corner, because such spot was on the most public road, since a farmer's travel is mostly on his farm, and a judicious selection of a site for his buildings, may, in a few years, save him hundreds, if not thousands, of miles of travel. If he has occasion to leave his farm twice or three times a week, he had much better travel over the distance of half or three-fourths of a mile that number of times to the main thoroughfare, than by building on one side or corner of his farm, be compelled to do it many times daily. But some will say, if we do not build on the road, how will our friends find us? Let no one give himself uneasiness on this point. The man who has friends will be found by them; and sometimes by being a little out of the way, he will be saved the interruptions caused by what the idle, and those who are obliged to devise some methods of killing time, denominate calls of friendship. A shrewd old farmer, one of the best hearted men, as well as one of the most accurate observers of human nature we have ever known, selected the position of his farm buildings at a considerable distance from the main thoroughfare. His friends objected to the singularity of his choice, as there were places equally favorable, and more accessible. "When a man builds his house in the road, as almost every one does," said our friend, "he must expect to be run over by those who have nothing else to do but to run over other people; if, on the contrary, he puts himself out of the way, the crowd pronounce him a singular man, an eccentric genius, or something of the kind, and as the mass are usually afraid of an uncommon man, they pass him by on the other side."

Salubrity is a point not to be overlooked or hazarded in the choice of a place for the farm buildings. Never allow any consideration to draw you into a swamp or the vicinity of one, where the sun of an American summer is sure to engender in some form the seeds of disease, if not of death. A dry soil, free ventilation, and the absence of all sources of malaria, are indispensable conditions to the robust health the farmer requires. We know of some who have voluntarily subjected themselves to dangers of this kind, under the idea that diseases of this class will wear themselves out. To such we recommend the case of a middle aged woman, found by a young friend of ours in a log-cabin on the banks of the Des Plaines, in Illinois. She was suffering under a fit of the ague, and when told to be of good courage, as the fever and ague was a disease that would wear out, she replied, "She believed it, as that was the fourteenth summer she had had it regularly, and she thought it was not quite as severe as it first."

Those, then, who are yet to erect their farm buildings will, in selecting the position, do well to consider their course of cultivation, the crops they will be most likely to grow, their comparative bulk and ease of removal, the distribution of their manures, the requisites of convenient location and health, and the capabilities of the place for the display of correct taste, before the die is cast, since so much of the value of a farm and the pleasure and profit of cultivation is depending on these things.

Another point of very great importance is the plan of the buildings, and the materials of which they are to be constructed. In a house that is well arranged, where the apartments bear a proper proportion and position to each other, where the whole is skillfully constructed with reference to comfort and ease of labor, every housewife knows the advantages that are gained in the saving of work, and in the economy of time. The houses of our farmers are like their farms, usually very much too large. Where a house is so constructed that no room is wasted, a building of very moderate dimensions will furnish ample accommodations for a respectable family; much better, indeed, than half our ill-arranged, half-finished huge "shingle-palaces," as our English friends term our dwellings, can offer. In building houses, comfort in the resident, and ease to the laborer, male or female, is too much disregarded. Great houses, large and high rooms, vast fire places, and abundance of light, seem to be the great requisites. When the cost of rendering a large and a long room comfortable; of furnishing or finishing them so as to cause the execution to correspond with the design; and the little possible use the farmer's family can have for so much room in a dwelling, is considered, we think a

more rational style of building should be adopted. But whatever may be the size of the farm house determined upon, the materials used and the execution should be such as to ensure permanence and durability. It may and will cost more in the first place to build well than ill; to use first rate materials than defective or worthless ones; to have the work done in the best manner, rather than half done; but the costly building will be the cheapest in the end. When finished, it is finished for a life, or perhaps half a dozen, and its repairs will cost but a mere trifle, while the cheap house will absorb from five to ten per cent of its first cost annually in repairs, and finally require rebuilding, while the other is only in its prime.

Stone or brick is the best material for building in this country; as in such houses the great conditions of durability, and an equality of temperature, are best attained. Brick or stone houses, however, require dry and well ventilated cellars, and the plastering of the rooms should not be laid immediately on the walls, otherwise they are apt to acquire humidity, and operate unfavorably on health. When proper precautions in these respects are taken, such dwellings are unobjectionable, and their durability, the ease with which they can be kept at a proper temperature for comfort and health, by heat in the winter and the circulation of air in the summer, render them preferable to others. The additional fuel required in the common wood farm house, over that necessary in one of stone or brick will, in a few years, balance the difference in the expense of materials, independent of the pleasure and comfort derived from the avoidance of sudden transitions from a high to a low temperature, or vice versa, and its general effect on the health.

In the construction and arrangement of our dwellings, particular attention should be paid to the economization of fuel. There are few farmers in the United States that do not find their fuel cost more than their bread. This annual expenditure might be lessened one-half or two-thirds by care in building, and the adoption of the improved method of warming houses by heated air, of which illustrations were given in the last volume of the Cultivator. That little extra cost at first, which prevents the necessity of a constant expenditure hereafter, is, to the farmer, the strictest economy; and that method of building which shall secure a desirable temperature at nearly all seasons, certainly should have the preference. Nowhere is the good effects of system, and a well digested plan of operations more conspicuous than in the construction and arrangement of the farm buildings. Order and judgment here exert their full influence, and in a great degree stamp the character and the mind of the man. The most slovenly are not insensible to the value of neatness, and the farmer whose buildings are inconvenient, ill constructed, disorderly, dilapidated, and without taste or design, cannot help a feeling of respect for the man whose domicile exhibits an appearance the reverse of all this. Let the farmer then build well, build for durability, build for comfort and utility, and not for ostentation or show, and he will find his reward.

**Audubon's North American Birds.**

SEVERAL years since Mr. AUDUBON published in a series of the most splendid volumes the world ever saw, a work with the above title, in which all the known birds of this continent were figured and colored with an accuracy alike creditable to the author who drew them in their "native woodlands wild," and the engravers of London who executed them for the public. The cost, however, of this work, in which the figures were all of the size of life, was so great as to put it beyond the reach of any not possessed of princely fortunes; and the constant discoveries of new birds which Mr. Audubon has been since making, added to the wishes of many, have at last induced him to undertake an edition in which the new varieties shall be incorporated, with the descriptions in the former work, the figures diminished from the first edition, but engraved and colored with equal accuracy. The terms are such as to place it within the reach of many to whom the great work was inaccessible, it being to be comprised in 100 numbers, each containing five plates with letter press, at the price of one dollar each number. The first volume containing fourteen numbers, containing about seventy species, has been completed, and furnishes one of the most beautiful volumes we have seen in many a day. We consider the present undertaking of Mr. Audubon as eminently useful also, or we should not feel the pleasure we now do in calling the attention of the public to the work. Ornithology has taken rank as a science; the history of birds forms one of the most interesting as well as delightful chapters in the natural science; they are creatures with which every one has more or less to do, and of which a knowledge is more or less desirable to every one; and the figures in the volume are so spirited and exact, the colors so just and beautiful, that one almost fancies they will flutter on their light wings from the paper, or pour from their tiny throats the clear sweet music to which he has often listened.

Of the excellencies or the demerits of Mr. Audubon's arrangement we say nothing; we leave those things to more competent judges. We speak only of what we know, when we say that no observer of nature will find any difficulty in recognizing any bird of his acquaintance; and that no one can read the beautiful and correct descriptions which accompany the plates, with-

out perceiving and feeling they are drawn from life. No one can fully appreciate the labor Mr. Audubon has encountered in collecting the specimens he has figured for these volumes, and gaining that intimate knowledge of their habits so necessary to render his labors useful. From the shores of Labrador and Hudson's Bay to the Capes of Florida, the confines of Texas, and the base of the Rocky Mountains, over mountain, and through woodland, glen, and swamp, has Mr. Audubon traveled, and returned laden with his rich and hitherto unknown, ungathered spoils. We are glad to perceive his labors are appreciated, and are about to give him that reward which he has hitherto failed of receiving. In this country alone, his subscription list is about one thousand, and a great addition will be made in England and France. The following extract will show one of the uses to which the labors of the ornithologist have been converted, one to which it is presumed Mr. Audubon never contemplated while engaged in his researches; it is from the lecture on birds before the Manchester Association, by Prof. RYMER JONES:

"Where are all our important and valuable works in natural history produced? Not in England. Where does the English press give birth to those works in which every tint of the humming bird, blazing and gorgeous as it is, is represented with the minutest accuracy. In France we have these works; but in England they are never purchased, and would never pay. And who purchases and pays for them there? The ornithologist! By no means; but those who make up the patterns for dresses. The weavers and manufacturers of fine goods know the importance of studying the colors that nature puts together. You will find that it is to their support in France that the authors of these works look. They have sense enough to see that to 'glide refined gold and to paint the lily,' to 'add purple to the violet,' would be extravagant; and that the combination of color in the animal world, like all the other operations of nature, is perfect. Nothing can be added or taken away without diminishing the effect of the whole. They are content, therefore, to take lessons of nature in this particular, and we must all acknowledge the success with which they manage this department of their manufactures."

For ourselves we look on many of the "counterfeit presentments" in the volume, as upon the faces of long remembered friends; friends associated with some of the happiest moments of life. As we look on them we forget that we are forty years older than we were when we first were delighted with these beautiful "blossoms of the air," days when childhood overlooked the obligations of the future, and care had not graven its furrows on the brow. We go back in imagination to the green meadows when we listened to the sweet merry notes of the bobolink as he fluttered over our head or settled on a wild flower, or tuft of rank grass—when we rambled in the wild wood, and saw the beautiful oriole darting among the leaf-clad branches, through the openings of which the golden light flushed and danced on the velvet moss, on which we were with our frolicsome playmates, setting time and the schoolmaster at defiance;—when our pulses beat quicker, and hope seemed to string our nerves anew, as the first song of the returning sparrow greeted our ears, and told "that the winter was over and gone;"—when we looked on the swallow as he came back to the old barn, or the sandy bank of the river, from his sojourn in the sunny south, as a creature of mystery if not of awe, reminding us of stories of fairy beings, or visitants from the spirit land; in short, we were young again, and as in childhood, we substitute feeling for reason, and are happy we neither know nor care why.

For ourselves we acknowledge our obligations to Mr. Audubon, not only for the substantial addition he has contributed to our stock of ornithological knowledge, but also for the pleasure his work has in more ways than one conferred. We have from our childhood loved beautiful pictures, and birds are among the most exquisite of these. It is the approach to nature in the grouping and coloring of Audubon's birds that render them so instructive and fascinating. We are glad to learn that he is still devoted to his pursuits; still adding to his ornithological treasures, and busily engaged in conferring new benefits on the cause of science. "May he live a thousand years, and his shadow never be less."

**Mechanics' Third Annual Fair of Western New-York.**

We have received the Circular of this flourishing and praiseworthy institution, announcing that the Third Annual Fair will be held at Rochester at the Center Market, commencing on the 12th of October, an arrangement adopted to accommodate those who visit the Agricultural and Horticultural Fair, which is to be held on the 15th at the same place, and thus unite the interest and attraction of both. The managers say they "feel the utmost assurance that the success attending the former fairs, is a sure guarantee for the ensuing—pledging that no exertions on their part shall be wanting to render the exhibition satisfactory to the contributors, worthy of the mechanic arts, and the patronage of the community." Rochester is the center of a rich agricultural and horticultural region, and the mechanics of that city are numerous, intelligent and enterprising, and their efforts, combined with those of the farmers, can scarcely fail of producing a fair unequalled hitherto in Western New-York. The advantages of such associations and fairs, cannot as yet be properly appreciated, but they will not be the less felt in the community. A visit to the fair of the New-York or Rochester associations will teach the mechanic more of the present state of his art, show him what is done and what remains to do, more clearly than years of study or travel can do. It is unnecessary for us to say we wish such associations every success.

# DICTIONARY OF TERMS

Used in Agriculture and its Kindred Sciences.

**GUM.** Mucilage and the gums differ little or none in their composition, and are generally the product of plants at their most vigorous period of vegetation; in fact, gum is nothing more than the extravasated juices, hardened by exposure to the air. Gum is a constant product in the composition of trees and plants, and exists in a liquid form in their cells. According to Gay Lussac, Gum Arabic is composed of

Carbon, .....	42.23
Oxygen, .....	50.94
Hydrogen, .....	6.93

Gum in this country is most commonly found on the plum and the cherry, and appears to be intimately connected with many of the diseases to which these trees are subject. Some have supposed that the disease called the black blight, which covers these trees with black unsightly protuberances, and speedily destroys them, is nothing more than the juices imperfectly elaborated, and, therefore, poisonous to the tree, while others attribute them, (and we think correctly,) to insect perforations and injury. It is certain, whatever may be the cause, that constant excision of these gummy spots or excrescences, as fast as they appear, is the only effectual cure of the disorder yet known.

**GYPSUM.** This substance, called also Plaster of Paris, or plaster, is one of the many salts of lime, and is composed when pure, of lime 33., sulphuric acid 44., and water 21., so that it is properly a sulphate of lime. Plaster may be considered as one of the most valuable of what are called the stimulating manures, and its use, already extensive, is annually rapidly increasing. Fortunately, the supply of this valuable substance is quite abundant in the United States, particularly in the central and western counties of New-York, where, in connexion with clover, it forms the great support of the staple crop, wheat, and gives an astonishing fertility to the soil. The *modus operandi* of plaster, or the manner in which it produces its effects, have been the subject of much speculation, and various theories have been proposed, most of which the advance of science has already shown to be untenable. Some have supposed that its action was to be attributed to the force with which it absorbed and retained water for the use of plants. Others have contended, that it acts by favoring the decomposition of animal and vegetable matters; but Davy showed that the mixture of plaster with these substances, does facilitate decomposition. Chaptal supposes that its value arises from its stimulating properties, which are prevented from being destructive, like some of the other salts of lime, by the slowness with which it is dissolved in water. He says, "The solubility of plaster in water, appears to be of precisely the degree most beneficial to plants. 300 parts of water will dissolve only 1 of plaster. Its action is, therefore, constant and uniform without being hurtful. The organs of plants are excited by it without being irritated or corroded, as they are by those salts which, being more soluble in water, are carried more abundantly into plants, producing upon them the most injurious effects." Another theory has been lately proposed by Prof. Liebig, which is certainly very ingenious, and explains the action of plaster in connexion with the presence of nitrogen in plants, more satisfactorily than any thing yet advanced. Prof. Liebig was the first to discover that ammonia was a constant constituent of the atmosphere, and on this fact his theory is based. We quote from Silliman's Journal: "This fertility arises exclusively from the fact, that the sulphate of lime fixes in the soil the ammonia dissolved in the atmosphere, which would otherwise be volatilized with the water as it evaporates. The carbonate of ammonia contained in rain water, is decomposed in gypsum, in precisely the same manner as in the manufacture of sal ammonia. Soluble sulphate of ammonia, and carbonate of lime are formed, and this salt of ammonia possessing no volatility, is consequently retained for the use of plants."

Gypsum is scattered by the hand at the rate of two or three bushels per acre, and its effects on the grasses are perceptible for three or four years. It is best strewn when the leaves are wet with a slight rain or heavy dew, and after the leaves of the plants begin to cover the ground. Some have objected to the use of plaster, that it produced greater crops at first, but that it speedily exhausted the land, and impoverished it. Those who make this objection, probably, took every thing from the land, and returned nothing to it, relying wholly on the plaster to keep up the fertility, a course manifestly erroneous. Clover should always accompany the use of plaster, and when this crop is fed off on the land, and made part of the course of rotation, no deterioration, but on the contrary, an increase of the grain crops has taken place. The plaster mills of New-York, usually reduce the material to powder after only drying it in the air, but kiln drying at a moderate heat drives off the water of crystallization, and renders it more valuable to the purchaser, as it takes in this case a greater quantity of the active materials, the sulphate and the lime, to make a ton. Considerable quantities of earthy materials are usually mixed with plaster, giving it a dark color, and on the proportion of these in the mass, much of the value is depending. Dried gypsum absorbs water rapidly, but it may be preserved many months without its properties being sensibly affected, if headed up in tight barrels. Chaptal affirms, from his own ex-

perience, that though the baked plaster evidently produced a better effect the first year, the next three years the difference was almost nothing.

**HAIR.** The covering of animals generally is known by the name of hair, although in some of its modifications it is called bristles, fur, wool, &c. while in all cases it is one of their most important appendages, contributing essentially to their safety, health, and beauty. Hair is elastic, and in masses almost impenetrable; it is a bad conductor of heat, and is found the finest and closest on animals exposed to a low temperature; it is a non-conductor of electricity, and materially aids in protecting animals from the electrical changes of the atmosphere; and the oil with which its surface abounds renders it impenetrable to water; thus hair serves to isolate or protect animals from the three most powerful external agents, heat, electricity, and moisture. Hair is subject to few diseases of its own, but its appearance is one of the best indications of the health of the animal upon which it is growing. Smooth and glossy, or coarse and staring, the hair exhibits almost unerringly, the treatment and condition of the animal. In some parts of Europe, and particularly in Poland, the human hair is subject to a complaint called the *Plica polonica*, in which the hair becomes matted together, grows to an enormous length, is exceeding sensitive and painful, and bleeds if clipped or removed. Death is not unfrequently the result from this disturbance of the system. Hair, in its properties, resembles horn, nails, feathers, &c. being soluble in water at a high temperature, and giving out, when burnt, ammonia, &c. Hair is a very active and excellent manure, and should never be wasted, as it too frequently is, by the farmer, but collected after butchering and applied to crops. Large quantities of wool are annually wasted about factories, clothing and carding machines, which might be converted to the effective fertilization of the soil.

**HAM.** This is one of the most valuable parts of the hog, and which, if properly cured, may be preserved for almost any length of time, retaining its fine properties. The hams most esteemed, are made from hogs fed on solid food, corn being the best, which are allowed considerable exercise; which do not weigh more than 200 or 250 pounds, and which have a large portion of muscular or lean flesh in their structure. When taken from the hog, the edges should be rounded off, or trimmed, and the first step in the preparation is the pickling, or salting. To do this, almost every farmer or butcher has his own way, some applying the salt dry to the ham, and repeating the operation of rubbing in until the requisite saltiness is attained, while others prefer making a brine, and salting the hams in that way. The Westphalian hams are much esteemed, and the pickle in which they are prepared is essentially as follows:—"Boil together over a gentle fire six pounds of good common salt, two pounds of powdered loaf sugar, three ounces of salt petre, and three gallons of spring water. Skim it while boiling, and when quite cold, pour it over the hams, every part of which must be covered with the brine. Hams intended for smoking, will be sufficiently salted in this brine in two weeks; though if very large, more time may be allowed. This pickle may be used repeatedly, if boiled, and fresh ingredients added. Hams, before they are put in the pickle, should be soaked in water, all the blood pressed out, and wiped dry." Much of the excellence of the ham is depending on the smoking. This should be done in such a manner that the ham shall be cool and perfectly dry throughout the whole operation. If too near the fire, they will be heated, and their flavor injured; if the building be too close, the hams will be wet, and taste as if dipped in pyroigneous acid. At Hamburg, where large quantities are prepared, the hams are smoked in the upper story of high buildings, while the fires, which are made of oak or maple chips, are made in the cellars. In passing through such a length of pipe to the chambers, the smoke becomes cool and dry; and the flavor of the hams is excellent. Hams intended for summer use, may be kept in any way where they will be dry and cool, and secure from the fly or bug. Washing with lime, or putting in bags of coarse cloth, one ham in each, is practiced by many. Some keep their hams through the season in the smoke house, making a smoke under them once or twice a week.

**HARROW.** Next to the plow, the harrow may be said to be the oldest agricultural implement. It is represented on the most ancient sculptures of Egypt, and is known in some form, wherever the earth is cultivated. Various forms are given to the harrow, from that of the wedge to the square, and the teeth are adapted to the work it is intended to perform. The great use of the harrow is in pulverizing the earth, tearing out and freeing the soil from the roots of weeds and grasses, and covering seeds when sown. For this purpose the harrow is preferred to the plow, as the latter usually places the small seeds at too great a depth for certain germination. Many of our best farmers, however, prefer the plow to the harrow for covering wheat, and as this grain, if sown in autumn, germinates better, and endures the winter better to have a greater depth of earth than the harrow usually gives, they are probably correct in their preference. A variety of figures of the harrow may be found in the present volume of the Cultivator, and the previous ones; also in Low's and Loudon's works on agriculture.

**HAY.** In all countries where the length and severity of the winters makes some provision for domestic animals necessary, grass cut and cured in the form of hay has been always the cheapest and most valuable. To

make hay, the artificial grasses, such as timothy, herds grass, clover, orchard grass, &c. which are sown for the purpose of meadow and pastures are preferred, being more productive, and more nutritive than the grasses not so cultivated. Grass for hay should be cut at the time when the nutritive parts are most developed, and this is in most cases when the plants are forming their seeds, but before they are ripened. In curing it, great care should be taken not to have it damaged by rain, nor should it be long exposed to the sun. In the first case the hay is washed and whitened, and in the last, the leaves crumble and fall off, thus materially lessening the quality of the article for fodder. Clover makes a hay which all animals eat greedily, but it requires more strict precaution in curing, and will bear less handling without injury, than any other of the grasses. Clover should be cut before the heads are fully ripened, and while it contains the greatest amount of leaves. If cut in the morning of a good day, spread out during the heat of the day, and before night put up in tall cocks but slender, that air may circulate through them, clover will cure with little difficulty and makes the best of fodder. For horses and sheep, clover is unequalled. The hay called rowen, or the second crop, is very fine, and good for lambs and young stock, but has not the nourishment which the more matured plant possesses.

**HEAT.** Into the speculations existing in regard to the nature and cause of heat we shall not in this place enter; its effect on all growth and vegetation is what is of most consequence to the agriculturist. Although some plants can exist with a very small degree of heat, yet some of it seems essential to all fluidity and circulation, and consequently without it there can be no growth. The rapidity of all vegetation is in a great measure depending on the degree of heat combined with moisture to which the plant is subjected, and there are many which cannot exist except in countries and places of high temperature. The effect of heat in forcing the growth of plants may be seen every season in our fields and gardens, and it has been ascertained by actual experiment, that a difference in temperature of 5° will advance or retard plants of the same kind and same advantages, temperature excepted, from ten to fifteen days. Of all our important cultivated plants, corn is the one which requires the highest temperature, and will endure it the longest without injury. By a comparison of our best corn seasons with the registered temperature, we have found that unless the three summer months give an average of at least 75°, good crops of corn cannot be expected. A few of the earlier varieties, and in some of the most favored localities may succeed with a lower average, but the most productive sorts, and the crop in general will not in such seasons ripen. Melons require more heat than the climate of the northern States affords to arrive at perfection, and in England they cannot be grown at all without the aid of artificial heat. Hot beds, by affording the means of an early vegetation, are useful in growing many plants which, without them, could not be cultivated.

**HEDGE.** One of the most beautiful and durable of fences, made of living plants, usually those of a thorny nature, and disposed to grow in a close and impervious manner. One of the most striking features of the English landscape, is the hedges which serve to divide the estates from each other, or the several farms into suitable fields for the purposes of agriculture. In the United States, numerous attempts at making hedges have been made, but owing to some unexplained cause, with but little success on the whole. The plants used here have generally been some variety of the foreign hedge thorn, but the deep green of the English hedge is not seen on the same plants here, and they are liable to the attacks of worms which speedily destroy them. The orange, the honey locust, the crab apple, and the wild mulberry, as natives of this country, have been tried with different degrees of success. Lately the buck thorn has been introduced for this purpose into the vicinity of Boston and Salem, and there are now some beautiful specimens of hedges from this plant, which promise to be all the lovers of this kind of fence can desire. It is probable the difference in the temperature and moisture between this country and Great Britain, is sufficient to account for the failure of the English thorn here, and render it expedient to rely on native plants of some kind, rather than import ones. The best specimens of the hawthorn hedges we have seen, are in the vicinity of Geneva, and of Solus Bay, both in Western New-York.

**HEMP.** The greatest hemp growing State in the Union is Kentucky, although some of the other Western States produce it to some extent; and there can be little doubt, that with proper protection and encouragement, and more attention to the several processes of manufacture, an article equal to the best Russian may be furnished for our consumption, and thus a vast saving to the nation be effected. Hemp requires a warm, rich, vegetable mold to produce it in perfection, and the best limestone lands of Kentucky, Tennessee, &c. are found to be admirably adapted to it. On any soil it must be considered an exhausting crop, but, perhaps, less so than tobacco, and a few others cultivated in the south of the Union. When hemp is fit to secure, it is either pulled or cut with a sythe, and dried in about the same manner as flax. The rotting process is one of the most important in making good hemp, and probably the one to which the general superiority of Russian hemp is owing. Ponds, or gently running soft water, are the places where hemp is best rotted, though dew rotting is much practiced. Hemp is dressed by hand or



by machinery, and on the perfection of the dressing much of the value and goodness of the article is depending.

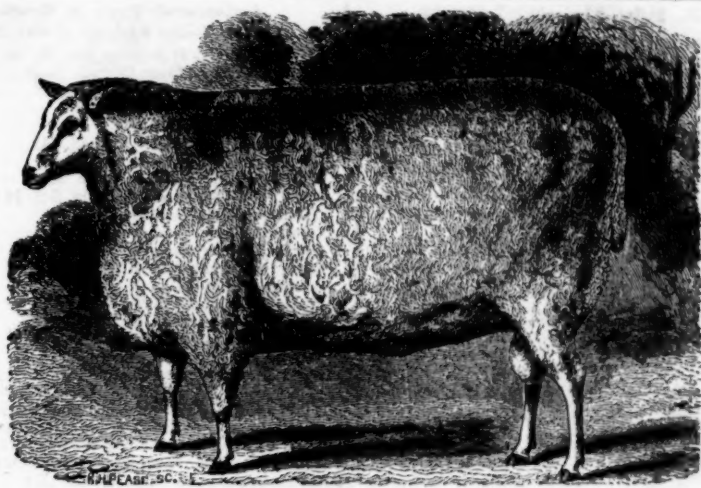
### WORK FOR THE MONTH.

SECURING crops constitutes the principal labor of October, and of these corn and roots are the most important. Where it is intended to sow wheat after corn, and this is sometimes a very good course, the earlier sorts should be used that the ground may be cleared the latter part of September. But in ordinary cases, the harvesting of corn in our latitudes, falls in October. There are few crops the quality of which is more injured by carelessness in securing it than corn; and it is one of such importance to the country that the best methods should always be adopted. We prefer cutting up the corn by the root, as soon as the ears are fully glazed, and then curing it by setting it up in small stacks, either in the field or some more convenient place. In this state of the ear, it sustains, as numerous experiments show, no injury from having the stalk cut at the root; and the stalk itself, filled with the elaborated juices and properly cured, makes one of the most nutritious and valuable kinds of fodder that a farmer can have. If cut up at the proper season, and skillfully set up, the corn will stand for some weeks without injury, and the husks loosening from the ear it becomes thoroughly dried, and ready to be placed in the crib when husked. The common custom of topping corn is not a bad one, where the saving of all the fodder is not an object; and a field so treated, presents a beautiful sight, as the husks fall open, and the golden ears stand thick in the mellow rays of an October sun; but experience proves that the ears of topped corn are not so thoroughly cured, and the cob dried as effectually, as when cut up by the bottom, and are more liable to heat in the crib. The experiments of Mr. Clark, Judge Buel, and others, prove also, that there is a loss in weight where corn is topped, and that of all methods, cutting at the bottom, when the grain is in the proper state, gives the greatest product, and the finest grain.

We alluded to the subject of saving seed corn in our last, but the subject is one of much importance to the farmer, and as some may have neglected the method there recommended, we refer to it once more. It is the worst policy to go to the crib, as many farmers do, and take their seed at random, satisfied if it will only grow. None but the best ears, those earliest ripe, large kernels, close set on the cob and well filled at the end, should be selected, and if there are two good ears on a stalk, save them by all means. Select your corn at or before husking, leave a few husks on each ear, and braid them up to be kept till wanted. We this year planted a small piece of corn about half of which was from seed saved by selecting the earliest ripened ears of last year, and the other the best common ears saved in the usual manner, and the first kind was ten or twelve days in advance in all stages of its growth and ripening. Never leave any quantity of corn intended for seed in a situation where the air cannot circulate freely. It is apt to heat and destroy it. Several years since in saving seed corn at the time of husking, the selected ears, with the husks stripped down were thrown into a large tub, which was gradually filled. Some two or three weeks elapsed before it was convenient to trace it up, when it was found quite warm, but no injury was apprehended until it was found by planting it the next season that its vitality was nearly destroyed, not one kernel in ten vegetating.

Potatoes should not be dug before they are ripe, unless they are so late as to be in danger of being frozen into the ground. Potatoes not fully ripened may answer for seed but are poor things for the table. Some varieties of the potato require a much longer period for their growth than others, and are sometimes condemned simply because they are not ripe. Potatoes imported from a warmer climate than ours will not ripen unless planted early; thus the Rohan and Sommeiller require the whole season for their maturity. Potatoes, if it is desirable to have them in all their excellence, should never have the sun shine on them after they are dug, and be exposed to the air and light as little as may be. Potatoes pitted, or buried in holes in the field, retain their freshness and good qualities much later than those put in open bins in the cellar, and the farmer will always do well to have a few pitted for spring use. The necessity for this may in a great measure be obviated, by lining the bottom and sides of a bin with turf, and when it is filled, covering it in the same manner. Potatoes will keep perfectly sound and good for years, if placed so low in the earth as to have a temperature too low for vegetation. Experiments made in a compact soil on the north side of buildings or walls show that four or five feet will usually be sufficient; in a lighter or more porous soil a greater depth is requisite. No water in any case should stand on potatoes, as it will soon destroy them. If potatoes are dug and pitted early, there should be an opening made at the apex of the heap, and filled with a wisp of straw, to keep out the rain, but at the same time to allow the heated air to pass off.

Turneps, ruta baga, &c. are among the easiest of roots to preserve. They should be left in the ground as long as is consistent with safety from frost; then drawn and put in cellars of moderate or rather low temperature, or pitted in the field at once. The turnep will sustain a much greater degree of cold than the potato, without injury, but heat has a worse effect upon it,



A LEICESTER RAM.—[Fig. 79.]

The subject of the above portrait, (copied from a steel plate in the Farmer's Magazine,) is a shearling Leicester Ram, bred by and the property of Mr. S. Bennett, of Bickering's Park, Bedfordshire, England, to which a prize of thirty sovereigns (about \$145-00,) was awarded at the Cambridge meeting of the Royal Agricultural Society of England, in July, 1840.

and in saving this root, heating is what is mainly guarded against. A hole made in the top of the pits with an iron bar, to be covered with a flat stone when the cold grows severe, will permit the heated air to pass off and prevent danger from this source. In the experience of a number of years we have scarcely had a turnep lost by frost or by heating, either when pitted or in the cellar, a proof to us of the ease with which this root can be secured.

Carrots and beets, like the potato, require more care than the turnep, to prevent the effect of frost upon them. The best way we have yet tried upon them, is to pack them in bins or barrels, and strew fine earth among and over them, to exclude the air, and preserve a uniform temperature.

If your pigs have had the run of your orchards in September, they will be found doing well in October, and afford proof that apples are worth something to the farmer when not made into cider. The cheapest mode we have yet tried in fattening hogs is with apples and potatoes steamed, always finishing with good sound food, such as corn, peas, or barley. All food given to hogs should be cooked; fruit and roots by steaming, grain or meal by boiling. If the latter is not convenient the grain or meal should always be well soaked or mixed with water, and if long enough to ferment and sour a little, it will be none the worse for it. Farmers who feed dry corn and peas to their pigs pursue a very wasteful course; as they may easily ascertain by experiment. Where corn is fed, there is a great saving in having it ground in the cob, and particularly when fed to cattle or horses. From what we have seen, we think there is less advantage in cooking food for horses and cattle than for hogs, and that with such it rarely repays the expense. Grinding, however, where economy is consulted, will always be practiced.

October is the month for saving winter apples. The best time is indicated by the mature ones beginning to fall from the trees, but in all cases the fruit should be suffered to hang on the trees as late as is consistent with safety from frost, or the danger of being blown from the trees. They should be carefully picked by the hand in small baskets, and as carefully deposited in the barrels or bins in which they are to be kept. A good mode is to pack them in empty flour casks, filling them with sand fully dried in the sun. The sand will exclude the air, and absorb moisture, and thus prevent the rotting that frequently takes place by contact. The method extensively practiced near Boston, where large quantities are put up for exportation, is to put the apples carefully picked by hand into clean dry barrels, generally purchased at the bakers, and when filled the head is gently pressed in and secured; no straw or shavings being admitted in packing. The barrels are then packed and laid on the bulge in courses on the north side of some building, with covering of boards to keep off all rain, and there they remain until the approach of a severe frost, when they are removed to a dry cellar of low temperature, and with windows to the north that the temperature may be kept low, and the cellar ventilated as long as possible. During the severity of winter, the windows or openings are closed, and they are thus secured from frost. The barrels are never tumbled about, and are never set on the end. Apples thus packed will endure a severe chill without injury, and do not require repacking; indeed the barrels should never be opened until the fruit is required for use. It has been suggested that well dried sawdust would be good for packing apples, but it is apt to attract moisture and mold, and most kinds would communicate an unpleasant flavor to the fruit.

Plowing may, in many instances, be advantageously performed in the fall. Tenacious soils on which it is intended to put spring crops, are essentially benefited by plowing in the fall, and exposure to frosts during the winter. Freezing pulverizes such lands more effec-

tually than any thing else. If intended for corn, it has by some of the most successful corn growers in the United States, been deemed best to put on a dressing of manure previous to plowing, and then another dressing before the corn is planted in the spring. The first is placed deeper, and is rotted more fully, than if all was put on at the spring preparation. Teams are usually in better condition for labor in October than in April, and what is done in the fall is so much taken from the spring's work. By having that part of the plowing done in the fall, which may be as well done then as ever, the work of the spring is lightened, the labor much expedited, and the crops put in in better season, and in better condition than without it. This was particularly the case last spring, when the season was unusually backward. The seed put in on fall plowed land was not only earlier, but being better rooted, stood the drouth which followed the rains of spring much better, and the crops on such lands have maintained their superiority through the season. Fall plowing is also useful, where the soil is infested with the larva of insects, such as the cut and wire worms, and the white grub. By turning up the soil deep, as late in the season as is practicable, thousands of these in their half torpid state in which they cannot move or again penetrate the earth, are exposed to the cold of winter, which to them is certain destruction.

Many farmers may find October a month for putting in drains in such parts of their farms as require them. Open drains are objectionable from the waste of land they occasion, and the frequent clearing out they require from filling in of surface earth. Covered drains are therefore to be preferred, as they are equally effectual in carrying off surplus water, occasion no loss of surface in cultivation, and require no labor in removal or clearing out, when properly planned and constructed. Open drains are only admissible, where considerable streams, or large quantities of surplus water are to pass off. All drains, when dug should be filled and covered as soon as practicable after digging, as the action of the air and rains is apt to make the banks cave, and add much to the labor of finishing. Drained lands can be worked much earlier than undrained ones, are materially warmer, and crops can be grown on them which on wet soils are impracticable. The wheat fields should now be occasionally examined to see that the water furrows are open, and that no water accumulates after rains on the surface.

### The Western Farmer & Gardener's Almanac for 1842.

We have received from the editor, Mr. THOMAS AFFLECK, who is also editor of that valuable agricultural journal the Western Farmer & Gardener, at Cincinnati, a handsome pamphlet of some 100 pages, bearing the above title, filled with useful and interesting agricultural matter, and furnished in any quantities to purchasers at the low price of \$2 per dozen. A glance at the table of contents, will show the variety of matters embraced, in addition to the common calendar pages of the almanac; and the numerous and well executed illustrations, will be found to add much to the interest and value of the work. We pronounce the chapter on swine with its illustrations, worth to any farmer who wishes to understand the varieties of improved breeds of hogs now in the country, and their essential points of difference, worth twice the cost of the almanac. Mr. Affleck is also the author of "Bee Breeding in the west," a most valuable treatise on the history and management of bees, to which we have before adverted in our paper, and in the Almanac will be found plans of the hives invented and used by him, copied from that work. We cordially recommend the "Western Farmer and Gardener's Almanac," to our readers, assuring them that in some, if not in all respects, it will be found adapted to all latitudes.

## N. Y. State Agricultural Society.

The Executive Committee of the N. Y. State Agricultural Society acknowledge the receipt of the following subscriptions, since their last report:

Life Members—[By payment of \$50.]  
Beekman, John P., Kinderhook. McIntyre, J. McDonald, Albany.  
Corning, Erasmus, Albany. Prentice, Ezra P., Albany.  
Ritch, Francis, Butternuts.

## Subscription Members.

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Allen, H. W. do 2  
Allen, Robert, do 2  
Biecker, Wm. E., Albany, 10  
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Bradley, Scheneman & Co. Syracuse, 6  
Benson, F., do 6  
Bennett, Thomas, do 2  
Burt, A., do 2  
Campbell, D. D., Schenectady, 20  
Colvin, D. S., Syracuse, 6  
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Collins & Barable, do 6  
Canfield, Harvey, Jordan, 6  
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Davis, Jr., Henry, do 6  
Dodge, W. J., do 6  
Forbes, J. G., do 6  
Fitch, Thomas B., do 2  
Fitch, George S., do 2  
Farmer, M., do 2  
Granger, Amos P., do 2  
Hawley, Gideon, Albany, 10  
Hibbard, Russell, Syracuse, 6  
Hicks, J. P., Liverpool, 2  
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Kidd, James, Albany, 10  
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Leavenworth, W., do 6  
Mickley, Philo D., do 6  
Marsh, M. S., do 6  
Noxon, B. D., do 6  
Nearing, Mars, Liverpool, 2  
Pumpelly, James, Oswego, 10  
Pumpelly, Geo. J., do 10  
Putnam, Hiram, Syracuse, 6  
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Rust, P. N., do 6  
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Sherwood, J. M., Auburn, 20  
Smith, Gerritt, Peterboro, 10  
Smith, Stephen, Syracuse, 6  
Strong, Oliver R., Onondaga, 10  
Hill, 2  
Fenn, Oliver, Syracuse, 2  
Tracy, James G., do 2  
Van Rensselaer, Stephen, 25  
Albany, 25  
Van Rensselaer, Wm. P., do 25  
Van Vechten, Tunis, do 25  
Van Benthuyzen, Chas., do 10  
Voorhees, Jas. L., Syracuse, 6  
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White, Horace, do 6  
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Jacqueth, J., Liverpool, 6  
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Kimber, F., do 6  
Krumpholtz, Alex., Cazenovia, 6  
Kirby, Edmund, Watertown, 6  
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Longstreet, C. P., Syracuse, 6  
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Minard, Isaac P., do 6  
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Orcutt, D. A., do 6  
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Osborne, Noah H., do 6  
Olde, Henry, do 6  
Parker, Jared H., do 6  
Phillips, E. L., do 6  
Pratt, Daniel, do 6  
Pope, Charles, do 6  
Phillips, Elijah, do 6  
Perkins, H. A., do 6  
Peters, T. C., Darien, 6  
Rowley, John, De Witt, 6  
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Smith, George, do 6  
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Stanton, Rufus, do 6  
Spencer, Joseph C., do 6  
Stafford, Amos, do 6  
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Wright, Josiah, do 6  
Wellington, F., do 6  
Walker, L., do 6  
Walker, James, do 6  
Ward, William, Geddes, 6  
Woodward, Jona., Cazenovia, 6  
Walton, W. B., Schenectady, 6  
Yates, H. C., do 6

## Annual Members—[By the payment of \$1.]

Ames, Silas, Syracuse.  
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Bristol, C. E., Syracuse.  
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Barker, William, do  
Brackett, W. W., do  
Breed, Joseph, De Witt.  
Browne, Wm. F., Butternuts.  
Button, Cyrus S., Newark.  
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Chapman, Waterman, do  
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Church, Hiram, do  
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Cotton, George H., Onondaga Hollow.  
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Dickinson, P., & Co., do  
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Gillmore, A. R., do  
Gould, E. O., Camillus.  
Grinnell, George F., De Witt.  
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Howell, John, Salina.  
Horton, Benj., do  
Hopping, E. D., do  
Hannan, W., Syracuse.  
Hyden, J., & Co., do  
Howlett, Parley, do  
Hicks, Charles P., do  
Huff, James, do  
Hale, J. W., do  
Jollis, Thomas, Gilbertsville.  
Hudson, Samuel E., Newark.  
Hudson, H., Syracuse.  
Hecox, Samuel, Lyons.  
Ives, Jesse, Bridgewater.

## Mr. Allen's Importations.

We had the pleasure some days since of seeing the first importation of improved stock, by the London packet McIntyre, which Mr. A. B. ALLEN, now in England, is sending to this country. It consisted of a two year old boar, Windsor Castle, a thorough bred Berkshire, with all the characteristics of the same breed in this country as to marks and color, but of much greater size, standing about three feet high, measuring about six feet on a straight line along his side, and weighing some 600 to 700 pounds, and every way fine and well proportioned; Earl Craven, a two year old ditto, not so large but rather more compact and finer, and a considerable number of pigs of the same breed of very large size and promise. These however, from their long and close confinement, did not show to so much advantage as the older ones; but as they have all been selected by Mr. A. from the choicest stock of the country, affording every promise through their parentage and their own appearance, they will, no doubt, under judicious management, come up fully to the models exhibited in the larger animals.

Another shipment of the Berkshires we notice was made in the packet ship Wellington, and further importations of cattle, sheep and swine are to follow.

## Agricultural Fairs in October.

By the County Societies of this State:

Cayuga Society, at Auburn, Oct. 13, 14.  
Columbia—at Hudson, Oct. 12.  
Cortland—at —, Oct. 6.  
Delaware—at —, Oct. 12.  
Erie—at Buffalo, Oct. 6.  
Genesee—at Alexander, Oct. 13, 14.  
Livingston—at Genesee, Oct. 22.  
Monroe—at Rochester, Oct. 15, 16.  
New York—American Institute, Oct. 11 to 18.  
Oneida—at Canandaigua, Oct. 20.  
Ontario—at Canandaigua, Oct. 12.  
Oswego—at Oswego, Oct. 6.  
Otsego—at Cooperstown, Oct. 6.  
Seneca—at Ovid, Oct. 21, 22.  
St. Lawrence—at Canton, Oct. 7.  
Tompkins—at Ithaca, Oct. 6.  
Washington—at Salem, Oct. 12.  
Wayne—at Newark, Oct. 16.

In addition to the above, Fairs are to be held in several other counties, but of the time and place, we are not informed. In several counties where societies have been, or are about being organized, no fairs will be held this season, owing to the late period at which the societies were formed. This we believe is the case in Albany, Rensselaer, Saratoga, Greene, &c.

## Agricultural Papers.

We have received the past month, two handsomely executed and ably conducted Agricultural Journals from the British Provinces—*The Colonial Farmer*, TITUS SMITH, editor, published monthly at Halifax, N. S., by R. Nugent, at 5s. currency per year; and *The Canadian Farmer*, published monthly at Kingston, at \$1 per annum. A. B. E. F. GARFIELD, editor. They both richly merit a liberal patronage, which, if the farmers of those Provinces understand their true interests, will be awarded to them.

*The Western Farmer and Gardener*, published at Cincinnati, by C. Foster, and edited by Mr. AFFLECK, has just completed its second volume, and a new one commences with the present month, affording a favorable opportunity for those who wish to obtain the work to send in their names. It is published monthly, 32 pages octavo, at \$1 a year.

"*The Plough Boy*," is the title of a semi-monthly, recently commenced at Edgefield C. H., S. C. by Wm. F. DUNN, at \$1.50 a year—16 p. octavo.

*The Missouri Farmer* hails from St. Louis—16 pages octavo, monthly, at \$1.00 a year—P. GOULD, editor.

A new volume (the 6th,) of *The Farmer's Cabinet*, Philadelphia, was commenced in August. The character of this paper is well sustained by Mr. PEDDER, the present editor. Terms, \$1.00 a year.

Mr. BUCKMINSTER having retired from the *Boston Cultivator*, Mr. H. C. MERRIAM has assumed the editorship of that paper; and we should infer from his opening address, that its character as a useful and interesting agricultural and miscellaneous sheet, will be well sustained. Mr. B. we perceive, has issued proposals for a new paper; to be called the *Massachusetts Plowman*, the first number of which is to appear about the first of this month.

*The Yankee Farmer*, Boston, is now edited by C. P. BOSSON, its former publisher; and Mr. COLZ, its late editor, has commenced *The Farmer's Journal*, a monthly, at, we believe, 50 cents a year,—making the fifth agricultural paper at Boston.

## "Review of the Market."

BELIEVING it would be acceptable to most of the readers of the Cultivator, we have made arrangements with a gentleman in New-York, every way competent to the undertaking and familiar with the subject, to furnish us monthly, a report on the state of the markets in that city at the latest possible date previous to our going to press. In the examination of such a report of facts, the intelligent farmer and others will find much to assist them in forming a more correct view of the probable range of prices, and the propriety of sales than they could obtain without it. The influence which foreign markets exercise over our own, render such reviews now much more necessary and acceptable than formerly.

## Taking Honey without Killing the Bees.

VARIOUS methods have been suggested and adopted, by which the lives of the bees might be spared, while their unnecessary or surplus honey might be appropriated to the comfort of those who had the care of them. It has always seemed but little short of murder to destroy such multitudes of these little laborers if any method of sparing them could be introduced; and various improved hives, which have been introduced to effect this object, have at different times been brought before the public. All these have been more or less useful, some by giving more room for labor, and some by placing their stores more at the command of the apiarian; still all seem liable to some objections, and the multiplying the methods, or bringing a notice of new ones before the public, may be of service.

The treatment of bees seems to be based on a few facts, or which are usually considered as such, viz: that a large number of bees, or two swarms in the same hive, will consume but a little more honey, if any, than a small number, or each of the two swarms in separate hives; and that as bees are a short lived insect,

performing their labors and the various functions of their lives, mostly, if not altogether, in a single year, the necessity of saving those bees in the fall, that are to perform the labor of the coming year, becomes more strikingly apparent. The fact, that bees may be stupidly injured, has long been known; but this knowledge has not been turned to practical use except in very few instances until very lately. The following, which we copy in substance from a foreign periodical, exhibits a method of turning this power to use, both easy and profitable.

The writer says:—In autumn I gather three or four of the large mushrooms or puff-balls growing in meadow lands, before they are fully ripe, compress them a little, and dry them thoroughly in an oven after bread has been taken out, and keep them dry for use. A tin box two inches square, with a pointed top, pierced full of holes, with small holes in the sides, made without solder, is to be provided to contain the puff-ball while burning. It must be supported on a stick some six or eight inches in length when used. As the object is to unite the swarm, from which the honey is to be taken, with another to live over the winter, a hive of the same size as the one to be operated upon is placed in a tub with the open end upwards, with a hole made in the lower part, in which the stick that supports the tin box is set. In this box is now put a piece of fungus or the dried ball of the size of a hen's egg, to which fire has been communicated, and it is placed in the lower hive.

The hive with the bees is now removed from its stand, and placed on the other, a wet cloth being closely secured around the line of meeting to prevent the escape of the smoke. The narcotic fumes are soon felt by the bees, which fall rapidly into the lower hive, the upper one being frequently tapped with a stick or the fingers, to jar down such bees as may not fall of themselves, or to disengage them from the combs. The dropping of the bees will be distinctly heard, and when it ceases the hive may be taken off. The torpid bees are now poured upon a table, and the Queen separated and placed under a glass. The bees are then sprinkled with a thick syrup made of a little ale and sugar boiled a minute or two, and applied freely with a feather. They are then returned to the empty hive, and on this is now placed the hive with which it is intended the swarm shall unite, and the cloth is replaced, so that no bee can escape. In this position they remain for twenty-four hours, or the following night, when the cloth is removed, and the hive placed on its former stand. The bees in the hive descend to feed on the honey or sugar on the sprinkled bees, and in the operation of clearing them, are so thoroughly mixed, that no distinction is ever afterwards apparent. The few bees that remain in the comb may be killed before they recover from their stupefaction, and after the amalgamation of the swarms is complete, the reserved Queen may also be destroyed. She is reserved thus far to guard against contingencies.

Other narcotics, such as tobacco leaves folded in paper, previously dipped in nitre and dried, have been used, but the puff-ball will be found preferable to any other, both for ease of preparation, and certainty of execution. The writer states that of a great number of cases in which he had taken the honey and united the swarm with another, not one had failed of success. He considers September the best month for taking honey in this way; and if the bees are secured in the hive at night, the application of the smoke may as well be done by day as by night.

## An Excellent Regulation—Preservation of Birds.

A FRIEND has forwarded us a law passed at the last session of the Pennsylvania Legislature, providing for the safety of certain kinds of birds during the early part of the season, or while they are most serviceable to the farmer, to take effect in the county of Chester, and parts of the counties of York, Lehigh, Delaware and Montgomery. The act declares it to be unlawful for "any person to shoot, kill or destroy, during the months of April, May, June, July, and the first ten days of August inclusive, in each and every year, any robin, flicker, bluebird, woodpecker, thrush or other insectivorous bird, other than blackbirds, under a penalty of two dollars for each and every offence." The act does not prevent any person from killing such birds as are found attacking newly planted grain crops; and it is to be hoped it will prevent that indiscriminate and wicked slaughter of these useful little birds, that are our most effectual aids in destroying the multitude of insects that destroy the fruit and the crops of the farmer.

## The Murrain.

This disease has in many places the present season proved fatal to cattle, and although we have much more faith in prevention than in the cure of this disease, still the following from Mr. Forsyth in Canada, is given in the hope that it may prove as effectual as it is said to be:

"Give 1-2 oz. pearl ash dissolved in two quarts of iron water, (from blacksmith's trough.) If not better in 5 hours, give 1-2 an oz more in a quart of water. The iron water should be warm. Give no drink but warm water for two days. Give warm mash to eat. This treatment in nine cases out of ten will be successful."

SPRING WHEAT—GRAT YIELD.—Mr. ERNESTUS Skinner, of the town of Prentissburg, Steuben Co., N. Y., harvested last season fifty-six bushels of Italian spring wheat from an acre. Mr. Skinner prepares his land for yielding 50 bushels of wheat to the acre, by growing ruta baga, at a net profit of \$70-42 an acre. Such are the practical effects of skill and science directing the toil of human hands.—Buff. Com. Adv.



## ORIGINAL COMMUNICATIONS.

"In Agriculture, Experience is of great value—Theories of little, excepting as they are directly deducible from actual experiments and well attested facts."

## The Hessian Fly, Wheat Worm, &amp;c.



EXPLANATION OF FIG. 80.

- 1—Wheat stalk with the larva of the Hessian fly deposited—three of the stalks punctured by the Ichneumon, *Ceraphron*—natural size, 3-20ths of an inch.—a. larva and pupa.
- 2—Section of the wheat stalk, with the larva magnified.
- 3—Larva advanced to the pupa state, magnified.
- 4, 5—Male and female Hessian fly, *Cecidomyia destructor*, magnified—6 antenna of the female.—7 antenna of the male.
- 8, 9—Male and female Ichneumon, *Ceraphron destructor*, magnified.—10 antenna of the male.—11 antenna of the female.
- 12, 13—Male and female wheat worm fly, *Cecidomyia triticea* of Kirby, magnified.
- 14—Section of a grain of wheat with the young wheat worm within it magnified.

EDITHS CULTIVATOR.—There is, perhaps, no period of our agricultural history, wherein the ravages of the Hessian fly have attracted more attention than during this season; the memorial to Congress of the individual who professes to have discovered a remedy, and who is asking for a compensation; the reference of this memorial to the Committee on Agriculture at the very moment that efforts are making to establish a National Society; the observations of MARGARETTA MORRIS, attracting the attention of so many eminent men and so many acute observers, joined to the extent of the insect's depredations, and to the advancement of agricultural science in all its departments, except entomology, have combined to attract this attention. Among other contested questions, arising out of the discussion, is the identity of this destructive race, *Cecidomyia destructor* of Kirby, with the wheat worm of New-England, the *Cecidomyia triticea* of the same author. The circumstance of the great Linnaeus making but one species, under the name of *Tipula triticea*, is itself a strong indication of their identity. Whether future investigations will enable us to restore the system and the nomenclature of this great Swedish naturalist, time alone is to determine. I frankly acknowledge that I dislike innovations upon such perfect systems, and think, as the Hibernian would say, that the two insects are identical; but while we should frown upon all attempts by men of science to introduce new names for the purpose of extending their own pretended discoveries, we should be equally disposed to encourage accurate investigation into the true character, habits, transformations and operations of insects:

"The sacred sons of vengeance, on whose course  
Corrosive famine waits, and kills the year."

Having recently returned from a visit through a wheat country where its ravages have been severely felt, and found that farmers have many more words than ideas respecting it; that there is much confusion in their views, some calling it "the insect," without ever thinking or inquiring whether there are two; others describing what is unquestionably the Hessian fly under the name of the "wheat worm," without knowing whether the worm became an insect, and some vice versa; while some are ignorant enough, and they are no very limited number, to confound it with a coleopterous insect of the beetle tribe, known at the south as the weevil, which infests the granary and the barn.—I have wished myself entomologist enough to describe this depredator or depredators; and let fit inquirers tell whether the two insects can be so reconciled as to make them either cogenetic or identical, but as I am not, and like all other men are prejudiced in favor of my own opinions, the attempt

will only be an approximation to the truth. It is necessary to remark that the Hessian fly, (*Cecidomyia destructor* of Kirby), is the only one known south of latitude 40°. It is a singular fact, tending to the establishment of the affirmative of this question, that the Hessian fly and the wheat worm in the same stage of their existence, are preyed upon by a parasitic insect of the order Hymenoptera, (four winged), belonging to the genus *Ceraphron* of Latreille: "This is frequently taken for the wheat fly or Hessian fly, from the circumstance of its being frequently found in vast numbers during the devastations committed by that insect, and many have been deceived by the specious circumstance of its evolution from the pupa of the Hessian fly under their own eye;" when in truth it is the only protector we have from the total destruction of our wheat by the rapid increase of the fly, and belongs to that vast class of insects included by Linnaeus under the name of Ichneumon; this insect deposits her eggs in the larva of the Hessian fly, through a puncture made by her acute oviduct in the stem of the wheat; and this puncture has given rise to the opinion, and in fact furnished the whole ground for it, that the Hessian fly pierces the wheat stalk for the purpose of depositing its egg in the manner I have endeavored to delineate in the above figure, when it is the invariable evidence of the destruction of the fly, and of the birth of its deadliest foe: and is indeed a wonderful display of that instinctive faculty by which the genus *Ceraphron* is enabled to find the true place of deposit, where her young, protected by the indurated covering of the fly in its pupa or flaxen state, feeds securely until the latter is killed. If the weather happens to be unfavorable to the Ichneumon, or if any other cause prevents its effecting this operation at the proper period, the following season is always a dreadful one to the wheat grower, as the fly upon an average has about eight or ten young, whose ravages over the whole face of the wheat growing region are commensurate with their increased numbers.

In the British Farmer's Magazine, vol. 3, p. 493, we are told that the larva of the *Cecidomyia triticea*, the acknowledged wheat fly of New-England, are preyed upon by the *Ceraphron*, an Ichneumon fly, which deposits its eggs in the body of the larva of the wheat fly. "I could not determine," says the very accurate author of that article, "whether it actually deposits its egg in the maggot's body; but there can be no doubt of the Ichneumon piercing the maggot with a sting; and from stinging the same maggot repeatedly, it is probable the fly delights to destroy the maggots, as well as to deposit eggs in their bodies." We shall see presently that the use of the words larva and maggot in the above extract, indicate strongly, that if the writer has not the Hessian fly before him, he has any thing but the wheat worm of New-England; and he uses the terms "*Cecidomyia triticea*" in the same sentence.

I think myself fully justified in asserting, that the puncture so often observed in the wheat stalk, is made only by the Ichneumon, because I have frequently been with Thomas Say, when pursuing his investigations upon this insect, and have seen and assisted in stripping down the glume or leaf of the wheat stalk, examining the dead or punctured larva, and the living *Ceraphron*; and the circumstance furnishes additional testimony to the truth of MARGARETTA MORRIS' discovery, that the fly deposits its egg on or in the grain, and not in the stalk. It seems indeed impossible, that the Hessian fly should effect the latter object without puncturing the stalk or stripping down the leaf; but it is not so clear an impossibility that it should be laid in the root. Whether laid on the kernel or in the root, it must have grown with the growth of the plant; and if in the latter, it will probably be found more difficult to provide a remedy. If the Hessian fly and wheat fly both deposit their eggs on the grain, it shows that some of their habits are similar, and that the oat most probably passes through the same process in its transformations.

I frankly acknowledge that MARGARETTA MORRIS' observations received no favor in my eyes. I thought it so well ascertained that the Hessian fly deposited its egg in the stalk or culm, that her conclusions excited ridicule rather than conviction. Having been much in the company of Say, and having relied most upon his accurate habits of investigation, my faith was not to be shaken by a woman; but it is not the first time men have been compelled to yield to the other sex; and the principal difficulty that remains is, that the Hessian fly has not been seen in the state of a worm, nor the wheat fly in the stalk or culm, by any person who is willing to become voucher for the fact. The insect, whose operations she watched so attentively, may therefore have been the *Cecidomyia triticea*, which, it is notoriously the opinion of all New-England, deposits its egg on or in the berry; and then, "*credat judex appello*," makes its next appearance in the shape of long, thin infusoria, their bodies, in the earliest stage gelatinous, semi-transparent, homogeneous, contractile, without vertebra, or radiated tentacula, feeding in the berry until it is all eaten. While on the contrary, the Hessian fly in all its earlier stages is found within the stalk; its larva when first produced from the ova, is white, its tail very acute, and abruptly attenuated, the head incurved; the upper surface of the body exhibiting a glassy or hyaline aspect, with an internal viscera like a greenish line; underneath it shows thick white clouds, which as it advances to the pupa or flaxen state, becomes united so as to exhibit regular transverse segments; when taken from its early membranaceous covering it seems perfectly inert; but when the pupa is advanced to its full stature, and assumes a dark reddish brown color, like flaxseed, with its jointed covering firmly knit together, I have known it to start and roll over several times on being removed from the wheat stalk. If the insect whose habits were thus watched by MARGARETTA MORRIS, was observed by her from the time of depositing its egg until it became a larva in the culm or stalk, or if its progress was marked from the latter state until the egg was deposited on the berry, so as to say with certainty that it was deposited by the same insect that was hatched from the larva that occupied the culm, then I think the identity of the two is placed almost beyond controversy. It is plain that the writer in the British Magazine could not have applied the terms maggot and larva to the worms described by Judge Buel.

We have now arrived at what seems an insuperable impediment to recognizing the two insects as cogenetic, viz: the birth from the ova, of a living active worm in the one case, and of an inert verminous larva in the other; and I must be permitted here to make the remark, with perfect deference to the judgment, the accurate observation and excellent intention of that great and good man, Judge Buel, that he has largely contributed to circulate erroneous views upon this important subject. In looking over the early volumes of the Cultivator, I find all his information derived from others; most of it from British writers, and some from very inaccurate correspondents—not one syllable from a man of scientific investigations. In vol. 1, p. 82, he considers the wheat worm as oviparous; and even goes so far as to dispute the existence of a fly altogether, giving from authorities nearly forty years back, drawings of the full grown worm, in the very act of laying its eggs within the kernel of the wheat where it had attained maturity. The whole of this article commending and adopting a report to some English Society, said to be from the pen of Mr. Bauer, is evidently a labored effort, not to identify the wheat fly or *Cecidomyia triticea*, (whose existence is disputed,) with the insect then making such disastrous displays of its power; but to show that the injury was not to be imputed to any thing belonging to the class insects. That the Judge was soon obliged to modify this opinion is manifest from the subsequent numbers of the same vol. p. 118, where he confounds it, through the agency of an extraordinary correspondent, with the weevil; and in vol. 3, p. 68, he admits it to be a *weevil*, and says it is sometimes confounded with the weevil; and finally on p. 118, he arrives

at the same conclusion as other naturalists, and makes it a fly, depositing its eggs on the wheat, but dropping when in the pupa state upon the ground where it remains during the winter. As all the prevalent notions of the wheat worm deriving its existence from the wheat fly, have originated from this or some equally loose foundation, without any accurate or properly authenticated investigation, I shall take the liberty of thinking that the wheat worm is the *Aecius pumiliarius*, which is said to have been so destructive in Scotland in the year 1830, (Country Times, May 17, 1830.) I place all the flies that infest the wheat, if indeed there are more than one, under the order Diptera. Mr. Bauer (and Judge Buel endorses his opinion) calls his worm the *Fabro triticea*, which in plain English, means a fly vibrating or quivering over the wheat,—and at the same time furnishes a plate of a worm laying its egg in the grain, and surrounded by its young brood, as described in the figure; the Judge naturally enough adopting the figure and rejecting the Latin, cautions his readers against the opinion of a fly originating so much mischief and argues in favor of the worm.

But the whole argument derived from the deposit of larva in the one case, and of a living animate being in the other, may be put on the debtor side of our profit and loss account, when we know that there are a considerable number of insects of the order Diptera, and a large number of the *Fabro*, that are oviparous and viviparous in the same stage or period of their existence, i. e. they produce young ones alive in the spring, and then lay eggs till autumn. Whether the Hessian fly or the wheat fly possess this power, I am not naturalist enough to decide; that they neither of them produce living animated contractile worms, I am fully satisfied, as well from all the analogies of nature as from the writings of those who favor such an opinion in the columns of the Cultivator. They have had no more success in convincing me of such an opinion, than they would have had if they had traced the genealogy of the House of Hapsburg—or the transmission of wheat and chest to the same source. When the two insects attain what is called the perfect or fly state, they are so exactly similar that I am at a loss to make the necessary distinctions; and if there is any, it probably arises from the one being hatched from the ova and larva in the grain of the wheat the same season, and the other remaining over the winter, and growing with the wheat stalk. The following very significant remark of Say, who had Kirby's Entomology before him, is worth noticing upon this subject: "When several of them (*Cecidomyia destructor*) are contiguous on the same plant, the pressure on the body of the larva is unequal, and an inequality in the form of the body is the consequence."

It is admitted by all scientific writers, that in both species of the *Cecidomyia*, the antennae are filiform, with joints subequal and globular; wings incumbent and horizontal, and the proboscis salient or moving with a snap; their legs and palpi are the same in form and number. Having myself never seen any but what I thought the same insect, and having no compound microscope, but only a small magnifying glass, my description of the Hessian fly would of course be not very minute, but the head and thorax are black; wings eciliate dark brown, longer than the body; the abdomen itself is brown and is covered with short black hairs. This description is from the living specimen. Now what says Kirby, who describes both insects, and every other writer who undertakes to describe the *Cecidomyia triticea*—that the head and thorax are black, body of a dark orange hue—wings brownish, fringed with slender hairs, incumbent and horizontal; shorter and wider than those of the Hessian fly and approaching more to the sub-oval; the whole insect somewhat less than the Hessian fly. He represents it as having a stinging instrument, or puncturing organ, which we have not detected in the Hessian fly, but which it is very probable the latter also possesses.

If I should follow the example of Judge Buel, reject the writings and adopt the drawing of the wheat head from Kirby, it would be easy to show that every worm delineated in the wheat is a true larva of a fly; the jointed segments, membranaceous covering and gear with a snap, indicate this very strongly; and the circumstance of its being preyed upon by the Ichneumon, corroborates the opinion.

Friendville, Pa. 7 mo. 29, 1841.

## Buckwheat, Rye and Clover.

MESSES. GAYLORD & TUCKER—Having made an experiment with a triple crop, it may not be uninteresting to some of your readers to give a few particulars thereof, and the result. In the beginning of August last year, I sowed with the same preparation of ground, buckwheat, rye, and clover. All which have done well; so that I am going at this time more largely into this mode of culture. Part of a field I have just covered with wheat instead of rye as the third article. I was encouraged to do this from observing that a few stools of wheat, that accidentally sprung up last year among the buckwheat, rye and clover, were fine.

But in particular, I manured a poor, worn out sandy quarter of an acre, with five cart loads of compost, and having first sowed and harrowed in the rye and buckwheat, I then sowed the clover seed while the ground was fresh stirred. Next I covered a part of the quarter acre (selected for a particular experiment,) with pine leaves, a part with green pine boughs—and a part left uncovered—and here I observe that all three grew best on the part covered with pine straw, and better on that covered with the green boughs than where uncovered. I sowed this piece on the 8th day of August last, and on the 6th of October, or in two months, I cut the buckwheat and the product was 54 bushels or rate of 22 bushels per acre. The rye cut in June last, was a good yield, but through an inadvertence was neglected to be measured. The clover was near knee high when the rye was cradled and will yield a fine swath for seed now nearly ripe. So with the clover in another field sowed in like manner. I hope next year to report favorably of that sowed as above stated this season. In mean time, yours, &c.

SIDNEY WELLER.

Brinkleyville, Halifax Co. N. C. Aug. 6, 1841.

## Use of Lime.

MESSES. EDITORS—I have been induced to take my pen, by reading an account of experiments in the use of lime, by your correspondent at Tivoli, (N. Y.) which appeared in the number for July of the current volume. He has used lime until satisfied on that subject. He does not state the quantity per acre, but says there was no perceptible difference between the limed and unlimed crops. Lime has been used considerably in this place, and has seldom or never failed of paying the expense of getting it, if used on the spring grains or clover. On potatoes it does but little good in comparison with what it can do on corn or oats. Wheat and rye, if sown on the first application, will show but little difference, if any, and it is a prevailing opinion here that it does no good to these crops. Let your correspondent try it on corn, and follow that with wheat. By that time the lime will have begun to act strongly on the vegetable matter already in the ground. If then he can see no difference between the limed and the unlimed, we have only to say his land is not the right sort to put lime on.

Lime here acts more beneficially on land that is naturally quite dry. Therefore, if he puts it on high land, as the rate of from fifty to eighty bushels to the acre, I think he can hardly fail of seeing the difference, unless his land is now strongly impregnated with limestone. Here such land is but little benefited.

D. V. O.

Watford Grove, N. J. August 14, 1841.

### Buckthorn Hedges.

WILLIAM GAYLORD, Esq.—Dear Sir—In replying to your favor of the 12th of August, it will give me pleasure to furnish you any information in my power respecting the Buckthorn for hedges. It is nearly forty years since I commenced experiments with a variety of plants for making hedges. First, with the English Hawthorn, and soon found it was not adapted to our warm dry summers; it would blight as early as August and lose its foliage, and was frequently destroyed by the borer. Among other plants, I tried the three thorned acacia recommended by Judge Buel, but the experiment was not satisfactory; it was too open below, and liable to be killed down by the winter as much as it grew the previous season. In the garden of the venerable Dr. Holyoke, of this city, which adjoined that of my brother, there was a large tree of the buckthorn or Rhamnus cathartica. In digging the latter garden, about the year 1808, there were found several young plants which had grown from seed shed by this tree. They were given to me and set out in a nursery; finding they grew rapidly, I was induced to try them for a hedge, and I have been highly pleased with the result. They were set in a single row in my garden, and very soon became a beautiful hedge, and it remains so to the present time. Not a single plant has failed, and has never been attacked by any insect; it vegetates early in the spring, and retains its verdure very late in the fall. It can be trained into almost any form, and makes a beautiful arch over a gate way or passage. I was so much pleased with this experiment, that I have since set out several other hedges, all of which are now making a beautiful appearance. With these properties, it has become quite a favorite plant for hedges in this section of the country, and I have been induced to raise it for distribution. I have now at least one hundred and fifty roots of this hedge, which has been greatly admired by every person who has seen the same. I am so fully convinced that the English hawthorn is not suitable for our climate, I should not advise any one to set out a hedge with it, provided it could be done free of expense. One that nearly surrounded my garden began to fail soon after it was set, and I was induced to set a buckthorn between each of the hawthorns, and it now makes a fine and thick hedge.

Respecting the culture of this plant, I should recommend sowing the seed in the fall (as it is taken from the tree,) rather thick, in drills from 14 to 16 inches apart; it will vegetate the next spring; should leave it in the seed bed the first season, and remove them to a nursery the following spring. As soon as the plants are of a good size, about eighteen inches high, I should plant them out where I wished to make the hedge, in a single row, about eight or nine inches apart, either in the spring or fall of the year as suited my convenience. As soon as they begin to vegetate after setting them out for a hedge, I should head them down to within six inches of the ground, which causes them to thicken from the bottom; this I consider very important as it tends greatly to beautify the hedge. The only fault I find with my first hedge is, that I did not follow this plan, and it is not so thick near the bottom as those I have since set out. In the after management, very little more is required than to keep the ground clear from weeds, and to form the hedge in any way most agreeable to the cultivator. It should be trimmed regularly every year, and I consider the month of June as the most suitable season for that purpose; the greatest portion of the labor may be done with a common scythe.

In answer to that portion of your letter requesting information whether the plants would be suitable to the latitude of Maryland, I can only say, that I have no doubt it would answer for most of the States in the Union. It appears remarkably hardy, and adapts itself to almost any situation. I have been called upon for plants to be sent to several of the States, a number for the neighborhood of Baltimore, and I have not in a single instance been advised that they have not succeeded.

Very respectfully yours, &c. E. HERNEY DERBY.  
Salem, Mass. August 21, 1841.

### Milking Properties of the Improved D. Cows.

MESSRS. GAYLORD & TUCKER—An esteemed friend, Mr. BARTLETT of Connecticut, has called upon my brother and myself, through the July number of your valuable periodical, to give some account of our herd of Short Horned cattle, and I must plead other and more pressing avocations as the only reason why he has not met with an earlier response. The object of Mr. Bartlett appears to be, to show that so far as our animals are concerned, they do not sustain Mr. Colman's position, that Durhams are inferior to the native race for milking and dairy properties. LEWIS F. ALLEN, Esq. to whom Mr. B. refers, has, in the June number of your paper, met the position taken by Mr. Colman with great ability and success.

Besides high grade, and some native, we have twenty-five thoroughbred animals. By the term thoroughbred, I mean animals which are themselves, or whose dams and sires are recorded in Collett's Herd Book, which furnishes for them full and undoubted pedigrees. Among these animals, we have one cow and three female descendants, the produce of two animals which were imported by Enoch Silsby, Esq. of this state, under the name of "Boston," and were bred by Robert Curry; one cow with two female descendants, the produce of Washington and Panzy, imported by the late Pitman, and bred by Mr. Champion; two females, the produce of H-triet, imported by Joseph Lee; and one cow, the produce of Arabella, imported by the late Stephen Williams, and seven other female descendants of the last named animal.

One of these cows is sixteen, and two others fourteen years old. All of them are in good health and exhibit the appearance, so far as condition is concerned, of being young animals, and two of them have regularly bred up to this time. These facts do not contribute to prove that this breed of animals are too tender and delicate to endure our cold climate, as I have occasionally seen and heard it alleged.

The milk from nearly all of our cows is unusually rich, and the quantity much greater than we have been able to obtain from superior native cows with the same keep. My brother has regularly had good common cows in his farm for about twenty years, and he admits without qualification this fact.

Our cows have not given as much milk, nor made as great a quantity of butter, as have some other Short Horns, yet one of them, in April last, on hay, made more than twelve pounds of butter in a week, and we have repeatedly converted the cream in small quantities from this cow, into butter in fifteen seconds. In June, upon grass alone, this cow gave 350 lbs. of milk in a week, being milked but twice a day; the milk at this time was converted into cheese, and consequently no butter made from her. Had she been milked three times a day at this period, I am quite confident that her product of milk would have reached 450 lbs. and of butter not less than 14 lbs. per week. We have another cow which averaged 45 lbs. milk per day in June, and still another, (now quite old,) which a former owner assures me has yielded 25 quarts of milk per day.

We have also two heifers with their first calves, which averaged 47 and 35 lbs. milk per day through the month of June last. I will readily admit that among the great mass of the common cows of the country, we occasionally find those which are very deep and rich milkers. But little reliance, however, can be placed on their progeny for the same properties, whilst with those high bred animals, by using bulls from deep milking families, the produce is quite certain to partake largely of the sires and dams.

It would indeed be remarkable, as Mr. Allen well observes, if, in traversing the whole of this state, in the discharge of his

official duties, Mr. Colman, our late highly respectable Agricultural Commissioner, did not discover among the great mass of our common stock, some superior milkers and valuable dairy animals.

In the 4th vol. New-England Farmer, I find the following opinion given of the Short Horns, by Governor Lincoln, in a letter to Mr. Powell:

"I have now (of Denton's progeny) seven heifers in milk, four of them three years old, and three two years old; and for richness in quality and abundance in quantity, they are not excelled by the best cows of any age of the native stock. A heifer three years old, with her second calf, has not been dry since she dropped her first calf, having given 4 quarts on the morning of her second calving. For the dairy and the stall, I speak with the utmost confidence of their pre-eminence."

I have recently had an interview with the intelligent and persevering owner of the "Cream Pot" breed of cattle, and Col. Jacques assured me that he attributed the rich dairy properties of his herd more decisively to the Short Horned bull, Gables, than to the native Haskins cow, from which his whole herd, as I understand, descended, and it would seem from Mr. Haskins's own account of the produce of this cow, as published in the 8th vol. New-England Farmer, that he must be correct in this opinion; she is there represented as having made in two days 2 lbs. butter, which is 9 lbs. 10 oz. per week, being by no means a remarkable product, when compared with that of many of the Short Horns.

In Mr. Allen's valuable communication, he has given the product of six Short Horn cows, viz. in both milk and butter from three animals, in butter alone from one, and in milk alone from two animals.

The butter from the four animals varies from 11½ to 22 lbs. per week, making the average of the four cows 18 lbs. 6 oz. per week.

The milk from the five cows is from 28 to 35 quarts per day, averaging for each animal more than 32 quarts per day.

Besides the product of these six cows, I find the produce of butter from six more Durham cows, as follows, viz:

Mr. Hasket's cow, 19 lbs. butter in one week. {N. E. Farmer.  
Mr. Calvert's cow 373 lbs. do. in 32 weeks. {vol. 7. p. 150.  
Mr. Canby's cow 533 lbs. do. in one year, {  
Thomas Ash's cow, 64½ lbs. do. in 35 days—do. vol. 12. p. 50.  
A Durham cow, 14½ lbs. do. in one week—vol. 17. p. 403.  
Mr. Woolwich's cow, 14½ lbs. do. in one week—Cultivator, vol. 6. p. 109.

My belief is that the pure Short Horns, with good keep, (and no animal will thrive when starved,) is much more valuable than any other race, for the shambles, for the stall, and for the dairy; yet if our fathers have reared a better race, without system and without the least care in breeding, I shall bow with submission, regret the cost of my error, and hereafter "tread in their footsteps."

WELLS LATHROP.  
South Hadley Falls, Mass. August 19, 1841.

### Horses—Origin of the Morgan Breed.

MESSRS. GAYLORD & TUCKER—I lately received great satisfaction from hearing what appears to be a correct account of the origin of the Morgan Horses of Vermont; a breed known and esteemed for activity and hardiness throughout all the northern states; not remarkable for size, and scarcely known to sportsmen for speed. This race is perhaps as highly celebrated as any for general usefulness, and for such a degree of fleetness as entitles it to the appellation of fast traveler. Their height is from fourteen to fifteen hands, color bay, make round and heavy, with lean heads, broad and deep chests, the fore limbs set far apart, clean and sinewy legs, short strong backs, with that projection of the ribs from the spine which is a sure indication of powerful lungs, and consequently of great wind and bottom.

The original Morgan horse, called also the Goss horse, is well known to have appeared in Randolph and in St. Johnsbury, (Vt.) some forty years since, and to have been kept as a stallion, at first with but little, and subsequently with very great patronage, some five and twenty years, or until he was thirty years old or more. Various accounts are current as to his origin; many think it quite distinct from the Canadian breed of Norman French extraction, and consider the horse to have been of Dutch blood, and to have been introduced from some of the settlements on the Hudson river, southward of Albany. Stories are also told of a traveler's blood mare having got with foal by a Canadian or Indian pony at various places north and west, and having brought forth this horse; all these accounts are improbable, and appear to be unauthenticated.

For the last dozen years, being aware, both by observation and experiment, of the surprising results of crossing the Canadian with other breeds of horses, and having become acquainted with the vast variety and different qualities of various races in the Canadian breed, I have believed that the original Morgan horse was of French Canadian origin. This opinion being confirmed by the account here given, I am anxious to ascertain whether any one can prove it erroneous, and if not to make it public, that it may be known that thousands of horses may be obtained in French Canada of the same blood, and not inferior in qualities to the Morgan, whose existence added several hundred thousand dollars to the wealth of Vermont.

GEORGE BARNARD.  
Sherbrook, P. C. August, 1841.

#### [AFFIDAVIT.]

I was about 13 years of age when the Morgan horse was first brought to St. Johnsbury, in Vermont, where my father lived. As I am now 20, it must have been about 1824. On the eve of the second Tuesday in June, (for I well remember that the morning was training day,) I was at my father's house, and a man of the name of Abel Shorey, a skillful horseman of the neighborhood, was there also; when David Goss, Jr. my cousin, then aged about seventeen, came up from his father's, distant about three-quarters of a mile, with a message to Shorey, requesting him to go to his father's, (my uncle David's) and trim a horse that uncle John Goss had just then brought over from Randolph, distant forty miles. I accompanied them, and at uncle David's we found uncle John from Randolph, with a little heavy, handsome active bay horse, which he requested Shorey to trim, chiefly by pulling out and cutting the hairs of his tail, which appeared as if it had been sawed by knives. Uncle John said he was a Canadian horse that he had got from Justin Morgan of Randolph, who had lately brought him from Montreal. I afterwards frequently heard the manner of his purchasing the horse related in my father's and uncle David's families, which was this: uncle John had lent Morgan the sum of forty dollars on occasion of the latter's going a journey to Montreal in Canada. Morgan obtained the horse, then four years old, at Montreal, and being unable to repay the money on his return, disposed of him to uncle John to pay the debt. Uncle John, who was no horseman, now brought him to his brother, my uncle David, who was much of a horseman, in the hope that something might be made by keeping him for mares. I remember Shorey's calling him "a full blood French horse."

Uncle John Goss engaged Shorey to take the horse next day, (Monday) at Major Butler's, where I saw him cover four mares. My uncle David Goss kept the horse through the season, working him on his farm, and putting him to mares when they were brought; he also kept him through the next winter and the ensuing spring, when the foals were found to be uni-

versally excellent; uncle John took him back to Randolph where he made his second season; the third season he was brought to St. Johnsbury, and stood at uncle David's again. After this, as I went to learn my trade, I cannot give so particular an account of the horse, but remember that he was kept several seasons in St. Johnsbury.

This and more to the same purpose may be attested by David Goss, sen. Philip Goss, David Goss, Jr., Clark Stearns, Abel Shorey, Abel Butler and Thomas Pierce, all of St. Johnsbury.

JOHN STEARNS.  
Sworn before me at Charleston village, }  
this 14th August, 1841: }  
DAVID CONNELL, J. P.

### Management of Bees.

MESSRS. GAYLORD & TUCKER—In the last Cultivator, I notice an inquiry concerning diseased bees from Mr. QUAMBY of Cox sackle, in answer to which I propose to give the public some part of my experience and practice on the subject. It is no uncommon thing for bees to be troubled with disease in the months of April and May when improperly managed during the winter and spring. For these diseases I shall only give a preventive. Bees when exposed to the severe storms of winter and the damp east winds of spring, are most liable to disease, especially if the hives are too open or too close. If too open in spring, after the combs are filled with brood, the bees are obliged to retire during a cold storm to the upper part of the hive and cluster together to raise animal heat sufficient for their safety, leaving the brood to the fury of a northeaster unprotected. Death to the brood is the natural consequence,—the young soon become putrid, and before this loathsome brood of thousands can be removed by the bees, the greater part of them usually sicken and die, and if the colony is not entirely destroyed, it is rendered unprofitable for the season. If the hive is too close at the bottom, (and this is the only place that the air should be suffered to enter a beehive during the spring months,) a dampness is collected in the hive from the breath of the bees which is equally fatal to the brood with cold.

It is well known to every apiarian of much experience, that bees die from every hive more or less during winter. Now if these dead bees are suffered to remain under the hive and mold and putrify, it cannot be expected that the live bees will long remain in a healthy condition. But for the remedy. Bees should be kept dry and clean at all seasons; and to accomplish this it is necessary to use artificial means to some extent. Every hive should be of the best of workmanship, and made perpendicular, and if this rule is ever deviated from, it should never be smallest at the bottom, as this would allow much of the filth to lodge in descending, to the great injury as well as annoyance of the bees. I have used the Self-Protecting Hive with perfect success; it is also used by almost every apiarian in this part of the State, and receives the unqualified approbation of all. I place my hives in my apiary after having received the swarms, and suspend them by cleats on the sides of the hives. I then open the double inclined planes about 6ths of an inch to admit the free passage of the bees and also to ventilate the hive and discharge worms and other filth when disengaged by the bees. This is undoubtedly the best possible plan for discharging filth, and at the same time preserving the bees. My bees hang in this situation through the year. My apiary is furnished with doors to be closed during the winter, and also a false bottom, making it perfectly dark and dry. The planes being open, and the hive perpendicular, every bee that dies falls to the planes and is discharged, keeping the hives at all times perfectly clean and healthy. About the first of March I unclosethe south side of my apiary, and also withdraw the false bottom. I keep the north side closed until about the twentieth of May, when I remove it and give the bees an opportunity to range at pleasure from either side of the hive, making the apiary as open as possible except the roof. In this manner the bees are secured from cold storms during the winter and spring months, so prejudicial to their health and economy, and have their full liberty during the season of collecting honey. I have never known a hive of bees diseased when thus treated. And if your correspondent and other subscribers will use the self-protecting hive, and manage it as described above, I presume they will have no more about diseased bees.

The self-protecting hive having been illustrated and fully described in the February number of the Cultivator, renders a further description unnecessary here. The above hive may be had of my assignees in almost every state in the Union, and in nearly, if not quite every county in the state of New-York.

Wallingford, Ct., May 10, 1841. WILLIAM M. HALL.

### Clearing Land.

MESSRS. EDITORS—I noticed an inquiry by one of your subscribers for the best method of clearing new land, and as there has yet been no reply, it may not be amiss to give my opinion and views on the subject. For the good of land, and for the ease of clearing, I would prefer to have the chopping done in the months of June and July, and take a spring burn the next season. I prefer this course, first, because there will be no sprouts on the land; and second, because the stumps will come out three or four years sooner than they would, if chopped in the winter or spring months, as then they are sure to sprout, and thus long retain some vitality. To clear land slow and easy, I always girdle; and that work should be done in June, when the sign is in the heart. (?) I have seen the leaves withered and dried in one week. I always choose to let trees and maple timber stand until about half the top and branches fall to the ground, which will take place in some five or six years. When I wish to clear the piece, I cut the balance of timber down a few days before I wish to burn, always preferring the spring, as there will be less herbage on the ground at that time, and the burn, of consequence, more complete. I have seen land cleared that would not cost one dollar an acre to fit it for the seed, after the timber was cut down; as in dry weather, when so prepared the fire usually cuts it up effectually. I will answer friend Robinson in regard to a National Agricultural Society in the language of Sir David Crockett, "go-ahead, sir."

Wethersfield, Ohio. O. G.

### Large Root of Rye.

MESSRS. EDITORS—Accompanying this, I forward you a root of rye, the product of one kernel, which I thought was remarkable, if not without a precedent. I cut more than one hundred and twenty heads from it, and the mice eat of seven stalks before. The heads were but poorly filled, as it stood alone, and but few of them would come in blossom at the same time. It continued to send out new stalks as long as I let it stand. There were other roots in the vicinity of this, which had from thirty to eighty heads.

### Remedy for Girdled Fruit Trees.

I have an apple tree which the mice girdled four or five years ago, taking the bark off for about eight inches. I saved the tree by taking three clons of the previous year's growth, and carefully inserting each end above and below where the bark was off, tying them on, and covering the wound with some grafting cement. The tree appears to thrive as well as if nothing had happened to it. I am glad to say that I am indebted to your valuable paper, the Cultivator, for the idea.

New-Milford, (Conn.) August 31, 1841. M. E. MERWIN.



**Cylindrical Straw Cutter.**—(Fig. 81.)

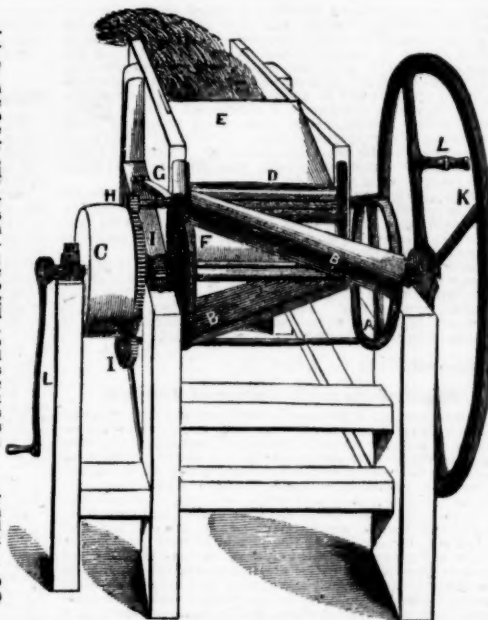
Messrs. GAYLORD & TUCKER—Observing frequent inquiries from various parts of the country for a machine adapted to cutting straw, corn stalks, fodder, &c. by horse power, has induced us to send you a cut of the Cylindrical Straw Cutter, which has been in use in this state many years, and is probably the best machine of the kind in this country, particularly for those who wish to cut large quantities by horse power. There are also two smaller sizes made suitable for horse or manual power, which cut 600 to 1000 bushels of straw, &c. per day. The former is much more powerful and will cut 1000 bushels of stalks or straw in the same length of time. The letter A represents two cast iron cylinder heads, to which are attached two spiral cast steel knives which act on a steel bed in such a manner as to cut with great ease and neatness; C, a pulley 14 inches in diameter, which should be driven 200 revolutions per minute; D, a cast iron fluted roller, intended to compress the straw, &c. and to assist the endless leather apron F, to bring forward the straw, which may be cut short or long by a trifling alteration in the gearing; E, an inclined slide board intended to direct the straw, under roller D, to a large balance or resistance wheel. L, L, two cranks to work the machine when applied to manual power. F, D, are operated upon by several spur wheels H, I, I, simply constructed and intended to move up the straw at suitable intervals. The box G, is about 4 feet long and 18 inches wide, which, with the operating part is supported by a strong frame work, as represented. Prices \$75, \$45 and \$30 each, according to size, and extra knives per set \$5, \$3 and \$4.

Yours, very respectfully,

R. SINCLAIR, Jr. & Co.

P. S. We are prepared to supply any number of our patent Thrashing Machines and Horse Powers, which are made on the same plan as those sold the last several years, and which have given entire satisfaction to all that have used them.

They will be sold at the following prices, viz:  
Two horse powers, with the thrashers and fixtures, \$160  
Four horse, ..... 310  
Baltimore, August 16, 1841.

**"Protection against Drouth."**

Messrs. Editors—I noticed in your paper of August, an article signed "An Onondaga Farmer," in which, after quoting several authors in support of his opinion, he congratulates himself in having detected an inconsistency in an article copied from the "Yankee Farmer," entitled "Protection against Drouth." The principle at which he takes umbrage is that advanced by the "Yankee," which reads as follows:—"In tillage the best protection against drouth that can be conveniently practiced to a great extent is, frequently stirring the earth, so as to keep it light and loose. In this way the earth at the surface is in many small particles, which serve as a nonconductor of moisture and retains it below, where the roots obtain a supply." The fact he admits, but denies the principle. Now the whole of this quotation appears to me to be strictly correct, and for these reasons:—It is a well known fact, that water rises in capillary tubes to a greater or less degree in proportion to their size, it rising higher and more rapidly in fine than coarse tubes. It is also well known that evaporation produces cold, or, in other words, carries off heat very rapidly. Apply these principles to the soil, and what is the result? The harder and more compact the earth is beaten, the smaller are the interstices between its particles, which constitute the capillary tubes, and consequently the more readily will the moisture in the earth be raised to the surface, and thence carried off by evaporation. Not only so, but the more compact the earth is made by bringing its particles closer together, the better conductor of heat does it become, and that heat which should be retained near the surface (or at least that portion of it which is not carried off by this rapid evaporation) is conducted off into the body of the earth, raising the water far below the surface into vapor and dissipating it. The surface is thus left cold and unproductive.

On the other hand, if the surface is loosened up, the interstices (or capillary tubes, if you please), are enlarged, water rises with more difficulty through them, and is consequently dissipated more slowly. The loose earth forms a very good absorber, but a poor conductor of heat, which, not being carried off by a too rapid evaporation, is of course retained near the surface for the benefit of vegetation. The same course, however, that makes the loose earth a good absorber, makes it also a very good radiator of heat. Consequently, as soon as the sun declines, it rapidly gives off the heat from its immediate surface into the atmosphere, until it is cooled below the temperature of the air, and causes it to deposit its moisture in the form of a copious dew. This dew is only temporary in its effects, for it is commonly all dissipated by nine o'clock in the morning. It does not increase the general moisture of the soil. It must not, however, be supposed that because the loose soil radiates heat rapidly that it becomes too cold; for being a pretty good nonconductor of heat, the same principle that prevents its heat from being carried off into the bowels of the earth prevents it from cooling lower than its immediate surface.

From this I would infer that loosening the soil—though upon the principle last stated it increases the quantity of dew—operates much more effectually in obstructing the rise of water by capillary attraction. If this is its effect, it is no less useful in a wet than in a dry season; for as in the one case it prevents the moisture necessary for vegetation from being carried off too rapidly from the surface, in the other it prevents the rise of the superfluous water which would injure the roots of the plants.

I, however, do not believe in too frequently stirring the surface. If the top of the ground is loose and open, no advantage is to be derived from disturbing it; but on the contrary, great injury, if the weather is very dry, as fresh moisture is every time exposed to be carried off from the newly turned earth. Nor should the surface of the earth be disturbed at all times without some regard to the temperature of the air, for by this means the injury done to vegetation by these sudden changes in temperature to which in our latitude we are so liable, are greatly increased. For instance, while our corn is struggling for a doubtful existence in a cold spring, the weather suddenly rises to 75 deg. or 80 deg. Then is the time to push the plow, for the power of the sun to absorb heat is in proportion to the looseness of the surface, and moreover the warm earth is turned under, and the cold exposed to the sun. But supposing the weather has been some time warm, it suddenly becomes colder. By working the ground at such times, you turn up the warm earth from below—the heat is more rapidly radiated—and all the evils of a sudden change of temperature are increased four fold.

I have thus stated to you some of the thoughts that have occurred to me at different times, as I have been following the plow through my corn fields. The style in which they are written will render it unnecessary to say that I am unpracticed with the pen.

Plattekill, Ulster co., N. Y., Aug. 7, 1841.

Young men, learn wisdom. Spend less money than you earn and you will every day grow richer. Never run in debt, and lawyers and constables will have to become farmers.

**Traveling Memoranda—No. 3.**

Madison, (Ia.) Aug. 13, 1841.

EDITORS OF CULTIVATOR—The road from Logansport to Indianapolis, 70 miles, lies through a country of mostly level clay land, covered with a great growth of timber and but little improved and the road less improved. In fact it appears as though the settlers of that region consider it a total loss to work upon the highway—at all events they build but few monuments to prove the contrary.

As I progressed south, I became more and more sensible of the effects of the severe drouth. In many places corn will not yield a bushel to the acre, and pastures and meadows, where such things happen to exist, would burn like tow.

There is a great defect in agricultural knowledge in this part of the world, or we should find more attention paid to the cultivation of grass and stock. Around Indianapolis, there are some slight indications of improvement in this respect. But the fact that an agricultural paper was not adequately supported at that place, proves that the country is more rich in soil than any thing else. It is painful to learn that the agricultural society at the seat of government of such a state as Indiana, after struggling through a brief existence, now sleeps too sound to be awakened by the ordinary cries of a community suffering for the want of a better system of agricultural education.

The editor of the Indiana Farmer, after having actually sunk his own small fortune in the attempt to do good to his fellow creatures, was compelled to abandon the enterprise. Oh, Indiana! when will she arouse from her lethargy?

Between Indianapolis and Madison, 80 miles, the country is older and more improved, and in places not so bad and in others worse affected by the drouth.

Like a great many individuals, this state of late years has been so engaged in "great works," that minor ones have been much neglected. Consequently, whoever has occasion to travel by stage here, must make up his mind to have a great deal of riding for a little money. Not but what the charges per mile are ample, yet in crossing miles of pole bridges, one gets a vast amount of perpendicular movement without any extra charge. Strange as it may seem to Yankee ears, and as discreditable as it is to Hoosier enterprise, in traveling 250 miles upon one of the most prominent stage routes in the state, I did not see the indication of a title of \$250 worth of work having been done upon the roads this season. I therefore have a suggestion to make to agricultural societies; that they offer a premium to that road district which shall keep the roads in the most perfect repair during the year. Nothing gives more character to a country than good roads. And I am firmly impressed with the belief that with very few exceptions, good common roads are more advantage to the farming community than rail-roads. Between Vernon and Madison is one end of a rail-road between the capital of the state and the Ohio river.

It is a good piece of work, but poor stock to the state, and not half as useful to the people as a good turnpike would be. But I found it a great relief in traveling, after having undergone so much perpendicular motion upon the more common "rail-roads" of this country. The face of the country between Vernon and Madison is uneven and rocky, and all the streams are at right angles with the course of the track, and the general level of the country several hundred feet above the Ohio, so that the grade from the town to the top of the hill is a very expensive one, and is not yet completed.

Madison is a fine flourishing town, and what is no little to the credit of several of her merchants, I found the well read numbers of the Cultivator upon their desks, and some fine Berkshire pigs in their yards.

What a proud satisfaction it would be to me to be able to say the same of every business man in my dear adopted state. There I witnessed another creditable indication of an improving state of society, in a very large temperance meeting at which I saw "female influence" fully exerted in a most glorious cause.

But fear of becoming prolix, warns me once more to say adieu, SOLON ROBINSON.

**No. 4.**

Prospect Hill, near Washington, Ky. Aug. 22, 1841.

EDITORS OF CULTIVATOR—For ten days past, I have been in such a busy interesting scene, that my memoranda have fallen behind; but to-day I am domiciled in the house of Judge Beatty, and enjoying one of the many real Kentucky welcomes that I have found in this free-hearted state, with an opportunity to bring up my notes.

I wish my readers to understand that I am no flatterer of persons, and that in speaking of them, I only wish to show what a good, kind, noble feeling exists among agricultural brethren, which is forming a "band of brotherhood" that will prove a blessing to this nation.

I took the Frankfort stage at Madison early in the morning of the 14th, and after being detained waiting for the horse ferry boat till nearly sun rise, we were at length on board, when the cry of "the fog is coming," brought every eye towards a great dark mass that seemed to be rolling down between the high

hills that bound the river on each side, like some mighty avalanche, threatening to overwhelm everything in its way. Crack went the whip, and the poor horses had to suffer for the drowsy tardiness of their masters; for strange as it may appear to strangers, so sudden does the fog come on here, that we had scarcely time to make the passage of the river, which the great drouth has rendered but a diminutive stream, before the fog settled down so thick that no object could be distinguished across the water, and any attempt to make the passage at such a time is not only fruitless, but sometimes dangerous. It not unfrequently happens, that the boat after a toilsome attempt, comes back to the same shore it left an hour before.

From Madison to Frankfort, 82 miles, the country is extremely hilly, and at present, parched with drouth to a distressing degree.

The town of Newcastle, which is a large country town, has but one small spring, and no wells, and the stream that usually supplies the town, as well as nearly all the cisterns, is quite dry. Much of their water has to be hauled several miles. The town is situated in a valley, and upon a limestone rock, that as yet has defied all attempts to penetrate through to water. In the settlement of a new country, slight circumstances induce the settlement of a place that afterwards grows into a town. Here, it was the fine spring, convenient and ample for the first settlers, but insufficient for the present population.

Frankfort, the capital of this capital state, is upon the east side of the Kentucky river, 80 miles from the Ohio, surrounded by wild, high, rocky, and romantic hills, and is a very different spot from what most men would select for a city. Here the beginning was induced by a favorable location upon one of the hills for defence against the Indians, and upon the "great Buffalo tract" that ranged through "from Limestone to Beargrass," now the flourishing cities of Maysville and Louisville. It may be interesting to some, that I should mention, that in the first settlement of Kentucky, the whole surface was covered with a thick cane brake, and the only method of passing through the country with any ease or rapidly, was to follow the Buffalo trails, or along the beds of creeks. Now that dense vegetable mass has entirely disappeared from the face of the country, except now and then a farmer has had the good taste to preserve a little patch as a memento of olden time. Olden time! did I say? Why some of the first settlers of Kentucky, yet live upon the land they won through a long struggle with the aborigines, who fought manfully to retain his favorite hunting ground.

When I arrived in Frankfort, I ordered the stage to set me down at the door of Thomas B. Stevenson, the energetic editor of the Kentucky Farmer. Much to my own, and more to his regret, his wife had left home that morning on a distant visit, and when I arrived, I found him also absent; but I found "the way prepared;" my name was familiar to the servants, and I went into possession of comfortable quarters with a feeling of freedom and pleasure that I always feel when I know I am welcome, and which I was sure of here, even before I saw the index of it upon the fine open many countenance of my friend when he came in shortly after my arrival.

I spent a couple of days at Frankfort very agreeably; saw some fine stock and farms in the neighborhood, took note of the noble improvements of the Kentucky river, by which the state is making a slack water navigation from the great coal, iron and timber region on the head waters, to the Ohio river; also visited the Penitentiary, and took particular notice of the great bagging manufactory; examined the fine specimens of beautiful marble in the hills; and on the evening of Monday, the 16th, by special invitation went out on the Lexington rail-road, five miles, to the plantation of Robert W. Scott, Esq. one of "nature's noblemen," dignified and improved by a location in "glorious old Kentucky."

In Mr. Scott, I found one of the best specimens of "a lawyer turned farmer," that I have ever met with. In his wife, I found those delightful charms that make a wife lovely. It is impossible for me to speak of this city bred pair, sitting on the porch, enjoying the comfort, contentment and happiness only to be found upon a farm, as I feel that the amiability of their character deserves. But their remembrance is impressed upon my heart, and forms one of those links of union, "that can, that must, that will," be made to exist between the friends of agricultural improvement.

Mr. Scott's farm is a perfect illustration of what may be done upon worn out land, by the improved system of husbandry. His farm is in a high state of cultivation—every acre, woodland and all, yields a good interest upon the valuation of \$60 per acre. The entrance to every lot is through a well hung, self-shutting and fastening gate, and every lot numbered with conspicuous figures upon the gate post.

Not a bush, or weed or brush, or old rotten log is permitted to disfigure the beautiful lawn-like blue grass pastures, which are covered by some of the finest specimens of Durham cattle in the state.

The greatest cultivated crop is hemp. Here for the first time, I witnessed the operation of the hemp cradle; and although I had looked upon it as a doubtful improvement, I am bound to say, after conversing with the proprietor, and more particularly with the field hands, that it is a decided improvement, and a highly useful agricultural implement.

After spending one of the most agreeable days of my life, I took the evening train of cars, and arrived in Lexington, Tuesday evening about dusk. The distance from Frankfort to Lexington, 28 miles, over a very rough rail-road; the cars propelled by horses.

I had no sooner registered my name at the hotel, than I found sundry old acquaintances, not of me personally, but by name.

Around Lexington, the garden of Kentucky, I visited so many fine plantations, and met with such a universal hospitable reception, that I should become prolix and tiresome to you and your readers, were I to go into particulars. I however spent a night with William P. Cud, the great Berkshire hog breeder of Kentucky. His fine farm is 24 miles south of the city, and is a part of the original plantation originally settled by his grandfather. He has about thirty full grown Berkshires and several fine Irish graziers. Five of his Berkshires are imported. Old Ben Shaker, a monstrous hog, is yet active and vigorous. Mr. Lossing's old Maxima and her companions had just arrived and looked full as well as could be expected after so long a journey in such hot weather. Mr. C. has one Berkshire barrow that will weigh near a thousand pounds. He finds ready sales for pigs at \$30 a pair. On Thursday, Mr. Cud took his buggy and drove me up to Dr. Martin's, where I experienced the mortification of finding him absent from home. We were however, very politely received by his son, and after spending a few hours among the doctor's numerous hogs and cattle, we took the road in the cool of a very hot day towards Lexington. By previous arrangement, I stopped at the delightful mansion of Richard Pindle, Esq. whose plantation adjoins that of the Hon. Henry Clay.

Mr. Pindle is another fine specimen of a lawyer farmer, he still following his profession. In the morning, after examining his own and the adjoining plantations, and the beautiful show of fine stock, Mr. Pindle took me in his carriage, and spent the whole day upon those unrivaled plantations, that abound in that most beautiful and unrivaled country around Lexington. I have taken copious notes of many things that gave me great pleasure that day, but I have already upon this letter out to such a length, that I must beg permission, if what I have written should prove interesting, to refer to those notes at some future time.

There is one fact that I must not omit to mention, that speaks

volumes in favor of the prosperity of this city and the high state of improvement of the country; and that is, that nearly every one of the roads diverging from Lexington, is a complete Macadamized turnpike.

Upon one of these, the Mayaville road, I started yesterday at 4 o'clock in the morning, and after passing over some 60 miles of a very fine country, (excepting the celebrated "Blue lick knobs,") I was set down at 1 o'clock, P. M. at the mouth of Judge Healy's lane, and calling one of his black boys from a neighboring hemp field, to take charge of my baggage, I walked up to the house, which according to Kentucky fashion, is situated in the middle of a 450 acre tract, about a half mile back from, and out of sight of the road. I found a venerable, good looking, intelligent old man, enjoying his book after dinner, under the shade of a noble old elm in the yard, and at once approached and announced my name, and in five minutes I was as much at home as though under my own roof—and here let me and my readers take a short rest from the labors and remarks of their old friend,

SOLON ROBINSON.

#### National Agricultural Society.

Messrs. Editors—I have been an attentive reader of the Cultivator, and am much interested in the views of your able correspondents, Messrs. Garret and Robinson, relative to a National Agricultural Society and National Agricultural School. I believe such a school would be productive of much good, notwithstanding the natural tendency such a national institution would have to favor the aristocratic few; but I believe a much greater amount of good back numbers might do with the Smithsonian fund, by purchasing the back numbers of the Cultivator or some equally valuable agricultural journal, and distribute full sets, except the current volume, to the head of every family engaged in agriculture that is not now a subscriber—not Messrs. Editors, that I propose giving you a fat job; far from it—I propose that the work be stereotyped and furnished at as low a price as any publisher in the United States would undertake to do it—for I myself am but a poor farmer, but I am a much better one than I was five years ago, and I attribute my improvement to the Cultivator, and I expect to improve further, either with or without the Cultivator.

#### Feeding Hay to Sheep.

I am located in a very hilly country, and of course my system of farming is various, but my intention is ultimately to confine myself to raising fine wool. I have tried many ways of feeding sheep hay. I have spread it on the ground, which I consider the most slowly and wasteful. I have fed in board boxes, or racks made about 2½ feet wide and from 12 to 16 feet long, with a roof to keep the hay dry; they are made of boards about 1 ft. or 1½ inches wide, nailed on 4 inch scantlings in each corner; the bottom board to stand on the ground; the next course to be nailed on 4 inches above, leaving that space all round the box for the sheep to put their heads through to the hay; but they will waste considerable hay fed in this way, if they are fed all they will eat. For the last two winters I have let my sheep run to the stacks, which may appear to be very wasteful and slovenly in theory, but I do not find it so in practice, owing to the manner in which I build my stacks. In the first place I take a pole about 3 inches diameter at the butt and about 2 at the top; blue ash is the best. I set this about 2½ feet in the ground and stamp the dirt firm around it; let it be long enough to project about 3 feet above the top of the stack, for convenience of the stacker in topping off; then take 4 blocks about 15 inches high, sawed off a log about 15 inches in diameter, place them around the pole, and on those blocks build a rail pen only three rails high; cover the ground with rails about 6 or 8 inches apart to keep the hay off the ground, and in this pen and around the pole, build the stack in the usual way. I generally put from 2½ to 3 tons in a stack; the sheep will eat the hay under the rails clear into the pole, and the stack will settle down the pole, the bottom resting on the rail pen, until the sheep will eat it all up, with but little waste. Such has been my practice for two winters past, and I have this summer stacked all my hay intended for sheep in this manner. My sheep are so many and good, and I have about 750. I have tried various lengths for the blocks to build the pens on, and find about 18 to 20 inches the most suitable length; larger sheep would need higher blocks.

#### Strawberries.

I cannot but earnestly recommend every farmer to bestow more attention to the garden, both on the score of profit and comfort. I last year raised over 4 bushels of strawberries on a piece of ground measuring 38 by 39 feet. They were set out in hills two feet apart each way, and required but little labor in cultivation. Respectfully,

NICHOLAS TITUS.

Rutland, Meigs Co. Ohio, Aug. 4, 1841.

#### "Knowledge is Power."

The characteristic of the present day, is *reformation and general improvement* in the agricultural department—in the sciences and arts—by general diffusion of agricultural and scientific knowledge and by "elevation and refinement of intellect." Thus it is by a knowledge of the laws which govern material substances, that we are to become acquainted with their nature and composition. Our success, in performing experiments, depends on our knowledge of the substances.

We can see a great deficiency among our most practical farmers, in the department of scientific knowledge.

There is a very extensive idea, which is too extensively entertained among all classes of community and which has too long wound its serpentine coils around its abettors, and has been a mighty barrier to improvements in agriculture, that a farmer "needs no more knowledge than is necessary for him to read and write and keep his account." &c. This might, perhaps, stand a better test a century ago, but in these days of intelligence, and in this enlightened age, we are taught different. Our fathers, we know, had but poor facilities for acquiring knowledge of any kind, and they raised greater crops than we do at the present day. There are many of our best farmers, for wheat growing, that have been "under the plow" as it is termed, until they have become completely impoverished; and then they are thrown aside as good for nothing. Therefore, under such circumstances, we must commence a *renewing system*. But how is this to be accomplished? I answer, by artificial aid.

But this cannot be done by us, who consider ourselves good practical farmers, because we have been taught to follow in the footsteps of our predecessors—our fathers, who knew nothing of the ingredients of the soil. We have no knowledge to analyze the different soils, nor to learn what plants will thrive most vigorously on a given soil. If we attempt this, we find soon, we are incompetent to the task—and deficient in all the necessary knowledge upon which we may form a correct judgment or arrive at a correct conclusion.

For every reflecting mind most know, that after a farm becomes so impoverished, by a series of exhausting crops, and exhausted of all its nutritious qualities, which artificial aid only will restore, that it requires all the knowledge and skill of the most profound scientific to restore, in part, the soil to the state that nature gave it; and even then, it requires the most systematic and judicious course of management to accomplish such an undertaking. A farmer should have more knowledge.

But I would not be understood that he should be a college learned man, nor have him pursue a classical course of study. But he should understand the sciences, particularly philosophy, chemistry, botany, geology, &c. By pursuing the sciences, the powers of the mind are unfolded and drawn out into action, and

thereby we are rendered close and profound thinkers, critical and scientific investigators, and close and exact reasoners. And furthermore, there is a pleasure in pursuing the sciences, which cannot be described; and which none but those who have experienced it, know how highly to appreciate. If a person becomes well versed in the sciences, he enjoys many pleasures, to which he who is contented to remain in ignorance, must ever remain a stranger. It matters not whether an individual designs to occupy some conspicuous station, or to follow the humble occupation of an agriculturist, he needs a well cultivated mind. He needs that knowledge, which will enable him to learn by actual experiment, what soils are better adapted to the growing of wheat, &c.

He should know by what means he can restore a worn out farm to its native fertility, which will be the least expensive. He should know the nature of every plant, and in what locations they vegetate the most healthfully, what is the preponderating ingredient that composes them.

The sciences unquestionably reflect a vast amount of light on these, which are, as yet, unhidden laws to the majority of farmers, which would if rightly appreciated, be productive of an infinite amount of good. And besides there always appears to a scientific mind, even in the *smallest plants* something that is calculated to expand the mind, and which strikes it with awe.

A. E. A. A.

Lansingville, Tenn. Co. April 8, 1841.

#### Experiments in the Culture of Potatoes.

Messrs. GAYLORD & TUCKER—I have been a constant reader of the Cultivator from its first number, and have always esteemed it a highly valuable periodical, but among the very many instructive communications in that valuable work, I occasionally find interspersed, articles which are not calculated to lead to any satisfactory result. I allude to such crack articles as give the extraordinary weight of a calf, six months old, without telling us how many cows he sucked, and what other food he had received, and the great weight of a yearling short horned bull, without stating the amount of milk, meal, roots, &c., he had consumed. Now, if such correspondents had, at the same time, taken a calf of some other good breed and given him food, equal in quantity and quality with his pet, we might arrive at some conclusion as to the relative value of the two breeds; but my principal object in this communication, is a passing notice of some of the reports on the Rohan Potato, as also an experiment made by myself, with the Rohan and three other varieties of the potato.

I shall not undertake to write out the several reports on the Rohans; several of them, however, run thus or nearly so:

From 2 Tubers I raised 2-14 bushels.

" 1 " " 2-14 "

" 1 " " 2 " "

" 2 " " 2 " "

In the above list of experiments, some have stated the number of eyes in each tuber, and the number of hills planted; but have not stated the distance between the hills, so that the product per acre cannot be ascertained. Again, few describe the soil and the quantity and quality of manure applied, and none, that I recollect, have tried any other variety along side of them, with the same soil, manure and treatment: so that nothing can be decided as to the relative productiveness of the different varieties. Again, they generally give the amount of the product, from the amount of seed—now, before I begin with my experiment, allow me to state one, made by one of my neighbors, with the potato called the *Irish Cup*. It was not a trial for a great yield from a given quantity of seed; but to settle the question whether potatoes could or could not be produced without the eyes of the potato. He took two tubers, of the Irish Cups, of medium size, cut them into thin slices, cut the slices crosswise, both ways, leaving the pieces about the bigness of a large pea, and planted them in a rich, moist, loamy soil, well manured. They were a long time in coming up, and when they did come, the plants were very small, and for some time apparently feeble; but they began to grow and soon attained the usual size of potato tops; and when they were dug, the produce was fifteen bushels of Irish Cups, which is a greater yield from two tubers than any recorded in the Cultivator. Still it proves nothing, for he never stated how much ground he occupied, nor did Mr. Jackson, of Wellsboro, Pa. (last vol. Cult., p. 12,) whose increased was 24 fold. Now, if the two Irish Cups planted by my neighbor weighed a pound, which I presume they did not, the increase must have been 900 per cent or 900 fold, which puts Mr. Jackson's Rohans in the background; but all this only goes to show how illusory all such experiments are, without a comparison with other varieties, and with equal treatment.

Now to my experiment. I purchased a farm twenty-five years ago, which is situated about seven miles from my residence in Waterford, and have let it on shares ever since, (keeping the direction of it in my own hands.) I divided my wheat land into three equal portions as nearly as was convenient, leaving the residue of the farm for meadow, corn and other uses, and put my wheat land under a three years course of cultivation, i. e. one year under wheat and two years under clover, applying plaster to the clover during the two years pasturage, to which use it was constantly applied until plowed up for the wheat crop. Under this course of management, in a few years the land was brought from a state of perfect exhaustion to a pretty high state of cultivation. The plot of ground on which I planted my potatoes is on an elevation, and a part of one of the wheat fields, and had been under the above course of management for twenty-five years—it contains about three acres, is perfectly level, the soil *loam*, on a subsoil of marly clay, and was under two years sown. It had never received a shower of manure since it was cleared some fifty years ago, except the plaster which had been put on it during the aforesaid course of management, and what was dropped by the cattle while feeding off the clover—there is not a shade on the plot, nor any locality to invite cattle to visit or beat upon one part more than another of the piece; the soil was therefore perfectly uniform.

In May last, the ground was plowed, after the grass had been closely fed off, harrowed and sown both ways with the plow, as evenly as possible, and planted with potatoes, the seed rolled in plaster, or gypsum, to be a little more *technical*, and in the following order, to wit: four rows of Rohans through the middle of the plot, and in contiguous rows on each side, the three other varieties i. e. *merinos*, flesh colored and Orange potatoes.

At the proper time, the plow was passed between the rows, both ways, and dressed out with the hoe once only. The season was so dry that in our region the potato was considered but about half a crop. With my tenant, we dug and accurately weighed 12 hills of each kind, and by an accurate measurement, ascertained the number of hills in a rod, and by the weight of the 12 hills ascertained that of the rod, and by 160 rods, the weight on an acre. That weight divided by 60 lbs. gave the following results per acre:

Merino..... 364-4-8 bushels to the acre.  
Flesh colored..... 35 "  
Rohan..... 322-4-5 "  
Orange..... 298-4-5 "

Thus, gentlemen, you have the result of my experiment, which was conducted with the greatest possible accuracy and care. Now, whether the proportions (of the yield) would have been similar if they had been planted in other soil and heavily manured, I certainly cannot decide; all I go for is, that when

experiments are made to test the relative productiveness of different varieties of the potato, they should be put side by side and honestly treated alike.

S. STEWART.

Waterford, March 22, 1841.

#### Notes of a Traveler in Ohio—Great Barn, &c.

We had been riding all day among villages and rich looking farms, in as lovely a farming country as the sun shines upon. Large Pennsylvania barns, extensive fields, numerous herds, and landscapes of unrivaled beauty, met our admiring eyes at almost every turn.

I hardly know how many places I had picked out during the day, as we drove through portions of Richland, Wayne, and into Stark county, as being each in its turn the most desirable location we had yet seen, and where, if I were the possessor, I would willingly end my pilgrimage, and settle down with scarce a thought or wish that would not be gratified in the scene around.

I thought nothing could be found finer than what we saw in the neighborhood of Wooster. At Massillon we found a very worthy friend and a banker, at his cottage, some distance from town, upon a large farm, and in the midst of his harvest. He seemed to enjoy himself much more among his sheaves and stacks of wheat, than behind his counter, and surrounded by the irredeemable currency, which I am sorry to say, is found in one of the richest states in the Union. His cottage is a perfect gem, and so situated, that you looked out upon nearly a hundred acres of wheat then ready for the sickle. All about him bespoke the thorough and independent farmer. When we took our leave of him I could not help feeling that his, if any man's, was a lot to envy. I thought we should find no more places to equal this, but, as we drove into the rich old town of Canton, I saw several which would have puzzled me much in making a choice. With any of them a reasonable man must have been satisfied.

Our business led us to a little village, some four miles down the river from Canton to a large milling establishment. In one of the proprietors I recognized an old friend, who some twenty-five years ago, while exercising the functions of a pedagogue, had brought me in rather too close contact with his birch scepter. The smart was soon forgotten, though the person was well remembered. The evening passed rapidly away, and finding it late we abandoned our purpose of returning and put up with our friend for the night. The first thing I did in the morning was to examine the barn, and in this land of agricultural monstrosities, as Ohio may be called, I have seen nothing to compare with "that barn;" indeed I question whether for size and completeness of its internal and external arrangements it has a superior, or equal, in the states.

The building is 140 feet long by 50 wide: standing upon a stone basement 140 feet long by 42 feet wide, and 9 feet high. The basement is used exclusively for stables; and so divided that no room is lost. The upper part is divided into floors of nearly 24 feet in width, and two large doors to each of four of these floors. The manner of filling this barn struck me as obviating the principal, and to my mind the only objection to large barns, viz: the increased labor of stowing away hay or grain. The first 24 feet at each end is without door. The drive way is on the adjoining floor, and from this the first one is filled, giving a surface of only 24 by 50 feet to work over. When that is filled the doors of that drive way or open floor are closed, and this is in turn filled from the adjoining floor, and thus on, until but one of the floors is left unfilled. Mr. Goodwill, the proprietor, is a good farmer, and the best evidence of it is the great pains he takes to save and make manure. His yards are so arranged that all the drainings are saved, and his straw is all washed into the manure heap.

My observations in Ohio, among intelligent farmers, have made me convert to earthen floors for stables for cattle or horses. I am so well convinced of their superiority, both in economy and health that I will never have any other. I questioned a great many farmers on the subject, and all had used them from one to twenty years, and their answer was uniform, that if they could have wooden floors free, they would not use them. Some have had recourse of late to their plank floors and filled up with earth. Whenever they can be made dry I should recommend their use, by all means.

When I commenced, I intended to have gone into some consideration of the condition of agriculture generally in the state, and of the condition of the finances, but I find so much of my sheet is filled by "that barn" that I have not room, for which, perhaps, your readers will be thankful. Another day I may resume the subject.

T. C. P.

#### Saving Clover Seed.

In the 12th number of the 6th vol. of the Cultivator there is a plan and description of a clover machine used by Mr. L. H. Saunders. In a subsequent number, No. 3 of the 6th vol., Mr. Saunders gives his experiment, and pronounces it a failure. From the remarks of that gentleman, I was almost deterred from making a trial, but knowing the advantages which would result from a successful experiment, I determined to make the attempt, hoping an improvement might be made in the defective parts. Accordingly I had a machine constructed, agreeably to the plan and description, and soon found that the wheels were too high, for in depressing the teeth to a proper distance towards the ground, it elevated the hind part of the box too much. I had the wheels reduced two inches in diameter. The same objection existed, but in a less degree. On a smooth surface we could have gotten along pretty well, but when the ground was uneven, the jolting of the wheels prevented it from doing effective duty. The wheels were cast aside and runners of three inch scantling substituted, and I am pleased to say, it has met my greatest anticipations. More than twenty acres of clover have been passed over, and the heads gathered cleaner and in half the time, that would have been required to cut it. The advantages of this mode of collecting over the usual one of cutting, are several fold. 1st. The stalks are all left on the ground to benefit the land. 2d. The heads are immediately taken to the barn, ready for the hulling machine, without the delay and labor of separating the heads from the stalks by flails or tramping. 3d. A man with a horse can strip double the quantity in a day, that he could cut. 4th. The seed is better, inasmuch as the heads are taken to the barn and secured from the weather, the dampness of which frequently causes them to sprout when exposed in the usual rotting process, as it is termed. For the use of this machine, the clover ought to be permitted to get fully ripe, and if the spaces between the teeth become clogged, they can quickly be freed by a sharp snide or shovel, which the operator has with him, in shoveling the heads to the back of the box.

In making another box, I would have the dimensions increased from those in the plate, say six feet wide and five feet deep, because one horse could easily drag it, and it would take off more speedily. The runner ought to be about two inches deeper behind, so as to elevate that part of the box and give the teeth a depression towards the ground. The teeth ought to be left flat on the top, and the two edges sharp—underneath they should be bevelled dove tail fashion. Those made use of were of wood. I think a further improvement can be made, by having them of iron, and of the shape of a disk blade.

I have no hesitation in stating that with the alterations above mentioned, the machine has proven satisfactory, and will be continued in use on my farm.

Brownsville, Pa., Sept., 1841.

JAMES L. FOWMAN.



## National Agricultural Society.

MESSRS. GAYLORD & TUCKER—When I last wrote to you, I little expected so soon to have any cause for addressing you again; but your correspondent, Mr. F. Burt, of Ohio, has made it necessary. I beg, however, that neither you nor your readers will suppose that I notice his communication on my own account. My sole object is, to prevent, if I can, any such misconceptions being entertained by others as Mr. Burt seems to have formed in regard to "the visionary notions" (as he is pleased to call them,) of Mr. Solon Robinson and myself, relative to a National Society of Agriculture. It is true that he has bestowed upon us the most exalted praise, by calling us "benefactors of the human race;" but he has done it in a way that reminds me very much of certain plays of "the olden time," which always ended in some of the company being made to redeem the pawns that they had forfeited in the course of the play. One of the most common sentences was, to require the condemned to pay a compliment to some one of the party and to spoil it. At one of these plays, within my recollection, a certain very awkward old Scotch bachelor who was some years past the age entitling him to be called a "Dumbarton youth," was commanded to perform this difficult task to a young lady equally remarkable for beauty of features and weakness of understanding. He had no sooner heard his sentence, than he marched up to the fair girl, and to the infinite surprise and regret of his auditors, said, "Miss Mally, you are an unco pretty lassie, but a grate fule."

Now, our friend Mr. Burt has served Mr. Robinson and myself much after the same fashion with this great difference, however, in the two cases, that the lady had a perfectly just title to the Scotchman's compliment, whereas we have none to Mr. Burt's, although each of us might with equal justice be called a great fool, if we really entertained any such "visionary notions" as he imputes to us. I shall leave Mr. Robinson to defend himself, as he is well able to do, and will proceed to my own vindication, by solemnly assuring all whom it may concern, that I have no knowledge of, nor participation in, any such scheme or schemes as Mr. Burt has most gratuitously ascribed to Mr. Robinson and myself. True it is, that we both anxiously desire to aid in promoting the establishment of a National Society of Agriculture,—an Agricultural School, and an Experimental Farm. But it neither is, nor ever has been, any part of my purpose, nor do I believe it is Mr. Robinson's, to petition Congress even for a single cent, much less "half a million of dollars," (as Mr. Burt asserts,) to erect our object. Neither shall I ever ask, either singly or with others, that "some two or three hundred boys should be taught farming at the expense of the Government," and "in the city of Washington;" although I can see no good reason why farming could not be quite as well taught within the District as elsewhere, if an agricultural school and experimental farm were established therein. As to "lobbing about the halls of Congress," I think it quite as degrading a practice as Mr. Burt can do, and therefore shall hardly shock his sensibility by being guilty of it. I have, however, no hesitation in avowing my entire willingness, nay, my most earnest desire to unite with other friends of American husbandry, in petitioning Congress to appropriate the Smithsonian legacy to establish an agricultural school and experimental farm somewhere within the District of Columbia. This money, he it remembered, is no part of our Government funds, but was bequeathed by a philanthropic foreigner, for a purpose designated in such general terms, as would well admit of such an appropriation; since there is no profession whatever which requires a more general knowledge of the sciences and arts, than that of agriculture, to carry it to the highest attainable point of perfection. What, let me ask, would do more, nay, so much, towards the accomplishment of this most desirable object, as such an agricultural school and experimental farm as might be established by the seat of the General Government?

Permit me now to notice Mr. Burt's specified objections to a National Society of Agriculture. The first is,—"the great extent of our country;" and the reason he assigns in support of this objection is, that owing to "the difference of soil, climate and productions,"—"what is interesting to one section is uninteresting to another." The objection itself might have some show of reason, if the one indisputable condition of the society had been, that there should be "four," or even one delegate "from 25 States." But such a requirement has never been made, nor, I believe, even thought of by any friend of the scheme; of course this objection has no validity; for should the scheme be generally approved, members enough, and more than enough will be found in the States most convenient to the place of meeting, to constitute a numerous association. Mr. Burt's reason in support of his objection is really a strong argument in favor of our plan. For admitting it to be true, that "what is interesting to one section is uninteresting to another," it is all important to the perpetuity of our Union, which every true friend to his country most ardently desires,—that this deplorable insensibility and apathy of the States towards the things which constitute their individual welfare, should be changed as speedily as possible. And I put it to the dispassionate judgment of any intelligent, unprejudiced man to decide, whether any means could be better calculated to effect this most desirable change, than annually to bring together, from the remotest parts of our grand confederacy, a large assemblage of the most intelligent, experienced, and zealous of our agricultural brethren. To bring them together, too, as they surely would be brought, solely for the purposes of mutually interchanging their local experience, of mutual consultation as to the best means of improving the husbandry, not of this, that, or the other section, but of our entire country; and above all, for the noble, patriotic purpose of diffusing to the very extremities of our yet happy Union, that fraternal spirit and cordial sympathy in all each other's general concerns,—the increasing want of which every reflecting man most deeply feels, and which neither the constitution nor the laws of the land can possibly supply.

Mr. Burt's second objection is,—"the expense" of the plan. To this, I hope, it will suffice to reply, that none would be subjected to it but those who were perfectly aware of its amount, and voluntarily agree to pay it, in the confident belief that they were contributing a portion of their income which they could well spare, towards establishing a society that, if aided by an agricultural school and experimental farm, would disseminate more rapidly than could be done by any other means whatever, that knowledge of scientific and practical husbandry which is more or less wanted in every part of the United States. The attainment of this great desideratum would at once elevate the yeomanry of our beloved country to that rank which their relative importance to our national welfare so justly entitles them to hold; and would go far, very far, towards exterminating forever those sectional prejudices, jealousies, and groundless dislikes which are at once the disgrace of all who cherish them, and the deadliest bane to our national happiness.

That the foregoing truly patriotic purposes and objects would form the connecting link,—the endearing bond of union between the members of such a national society of agriculture as its friends most anxiously desire to establish, I cannot permit myself for a moment to doubt. But I would most surely oppose it with all my might, could I possibly suppose with the funny Mr. Burt, that the delegates to it would do nothing more than "get a big dinner, a few cups of good wine; tell and hear some large stories; build a few castles in the air, and return home again." To this I can only

say, that if a sufficient number of planters and farmers can be found in the whole United States, willing to raise and spend for such purposes, "ten thousand dollars a year," which is the sum fixed on by Mr. Burt, as the annual cost of a National Society of Agriculture, I should not question their right to do so, but should certainly never become a member of such an association. The conceit, however, of Mr. Burt, in portraying it, is quite too good for me to desire that any part of the merit should be taken from him. It is well calculated to raise a laugh at the expense of the contemplated society and its projectors, at least among that numerous jest-loving tribe who care not a fig, provided they can indulge their risible faculties, whether it be at something really ridiculous, or at an object of the greatest national importance. Far, therefore, from me be the wish to deprive so merry a brother farmer as Mr. Burt of the self gratulation which he evinces in having excoqueted so good a thing as his anticipation of the actions and doings of such an agricultural society for the whole American people, as he has thought proper to imagine that Mr. Robinson and myself would organize and abet, if we had our way. Indeed, I am so great a friend to laughing, rather than crying when we can help it, that I assure our jocular friend, Mr. Burt, he is most heartily welcome to tickle himself and others as long as he possibly can, with the above or any other merry conceit that he can hatch, either against the contemplated society itself, or any of its friends, not excepting myself. If the attempt to organize it should encounter nothing more formidable than such paper-shot, the more that are fired at it the better; for they will probably attract towards it the attention of many who otherwise would hardly know that such a thing was in agitation, and all that the friends of the scheme desire to ensure its success, is, a thorough examination of it in all its bearings upon individual and national interests.

A word or two more, and I have done. After Mr. Burt has fixed it in his own mind, and apparently much to his own gratification, that the members of a national society of agriculture would meet at an expense of 10,000 dollars a year, solely for the purpose of eating, drinking, and making themselves merry with each other's long yarns, and building castles in the air, he proceeds very confidently to ask, if it would not be far better to spend the above sum in the gratuitous distribution of your paper, or some others of the same kind? I entirely agree with him that the latter expenditure would be better, infinitely better. But it so happens that the society which he has labored so hard to describe is entirely the creature of his own brain and can never elsewhere exist. Nay, it is so extravagant a caricature of any National Society of Agriculture which possibly could be formed in the United States, that, were any of the true friends of our cause to notice it seriously, they would make themselves even more ridiculous than Mr. Burt has attempted to make them. Should this attempt bring upon him the ridicule which he has so heedlessly and without any just provocation, aimed at others, he will have none to blame but himself.

I remain, gentlemen, your friend and constant reader,  
July 26th, 1841. JAMES M. GARNETT.

## Boynton's Straw Cutter.

MESSRS. GAYLORD & TUCKER—Notice in a late number of the Cultivator, a reply to Mr. Jacob Glutz of Marietta, Pa. referring him to Green's and other straw cutters for horse power.

Will you have the goodness to refer to 8th volume of the Cultivator, p. 220, and look at an advertisement there inserted, of an improved straw cutter for horse and water power. If more information is wanted on the subject, I am prepared to satisfy you by certificates now in my possession that it is not recommended beyond its ability. By adding to your remarks, the straw cutter above referred to, you will perhaps confer a favor upon the community, as well as do justice to the patentee.

Respectfully yours, JOHN BOYNTON.  
N. B. A machine can be seen at Mr. Brown's agricultural rooms, State-street, Albany.  
South Coventry, (Conn.) Aug. 20, 1841.

## Preparation of Lard.

MESSRS. GAYLORD & TUCKER—The following is our mode of trying up lard, of which we make the quality of the fat from the intestines, that from the leaf-fat, and that from the upper part of the back-bones. The latter is the superfine. So soon as the intestines are taken from the hogs, while yet warm, the fat is rid off and thrown into cold water, where it remains to soak some hours; it is then washed out and put into other fresh water in which it remains until next morning. It is then cut up into pieces not more than two or three inches long, rinsed again and immediately put on in iron boilers thoroughly cleaned. The fire is then applied, which must be free from smoke during the whole process of boiling, which should be continued for at least twelve hours. It is very frequently stirred during the boiling, and the bottom of the boiler scraped hard with the sharp edge of the iron ladle to keep the cracklings from adhering and burning, which they are apt to do towards the end of the process if the fire is strong and the boiling rapid. When the cracklings begin to burn brown, and the lard becomes clear as water and scarcely any evaporation is visible, the fire should be slackened. The bubbles rising to the top will be as clear as cut glass. Continue the simmering gently until the cracklings are quite brown. They never become crisp; but although brown and entirely done, will be soft and flabby. The clearness of the lard, the brown color of the cracklings, the crystal purity of the bubbles, and the nutlike scent arising, indicate the end of the boiling. Take the boilers off the fire or extinguish the fire, and when the lard is so cool that you can bear its heat on your finger dipped into it without pain, strain it off into clean tight vessels. Exclude the air; and you will have a nice article even from gut fat.

The leaf and chine fat are soaked in water at least forty-eight hours, after being thoroughly washed and cut up into bits not more than cubic inches in size. The frequent agitation and stirring of these in the cold water makes the lard much better. When put into the boilers the water should be carefully drained off, so that as little water as possible should go into the boilers with the fat. Apply the fire, and in eight hours these two kinds, which should be kept separate, will be done. The lard clear as water, the cracklings nut brown and crisp, and giving as they simmer the sound of rustling dry leaves, emitting the scent of nicely fried pork, and giving off scarcely any perceptible evaporation. Stir very often during the boiling and let no cracklings stick to the bottom of the boiler. For the last hour the boiling should be very gentle, rather brisk simmering than boiling, to prevent burning, which must be most carefully avoided. Cool and strain off, and exclude air as directed for gut fat, and you will have a snowy white, firm, fragrant article that will keep for years without the slightest alteration. Never put another parcel into the boilers during the process, and when one parcel is done, have the boilers most carefully scoured, and so clear that they will not soil a common handkerchief. Much depends on thorough washing, soaking, and agitation in clean pure water before boiling; much on careful boiling and stirring, and most of all on the perfect purity of the boiler. The slightest rancidity, burnt grease or oxidation will impart to the whole parcel of lard boiled in it, offensive or injurious scent, taste or color. Although I have stated the usual time of boiling, you

must not be governed by the time, but by the indications mentioned as produced by boiling. These indications must appear, no matter what the time has been, before the boiling or trying up is complete. Leaf and chine lard thus prepared are superior even to the best butter for making pastry, biscuit, all kinds of hard cakes and jumbles. Lard, like butter, should be kept in cool, dry apartments, subjected to as little atmospheric change as possible. In this country we usually keep lard in kegs or firkins of the linden or lime (tilia) tree, containing from 55 to 60 pounds. I however, prefer well glazed stone jars or tin buckets, because they are more impervious to the air. Very truly, gentlemen your obedient servant,  
Llangollen, (Ky.) Aug. 27, 1841. JOHN LEWIS

## On Harvesting Grain.

MESSRS. GAYLORD & TUCKER—Observing the remarks in the Cultivator for August, p. 127, respecting the proper time of cutting wheat to prevent its shrinking, having a piece of about four acres of the Italian spring wheat, rather late sowed, I observed it to be lightly struck with rust. I thought it a good opportunity to try the effect of early cutting. Accordingly had about one-third of the piece cut when the grain would have been said to be quite too green, although the sap had filled the kernel, but was easily mashed between the thumb and finger. Fearful of its being too green, I let the remainder stand six or seven days, and cut about half of the remainder, and four or five days the rest; observing the greenest of the first cutting had shrunk the most, I supposed I had made a mistake in cutting too early; but on getting in my wheat, I found the last cutting had shrunk much more than the first. The next question was to account for the difference, why that which stood and became fully ripe in the most favorable weather, should be lightest. On reflection, I saw the case is obvious—that is, while the grain is ripening the sap and nourishment is flowing to the head—that when the kernel is full and can receive no more nourishment, and the straw becomes drier than the grain, a reaction in the circulation takes place, and the drying straw draws the sap and nourishment from the grain, which causes the greater shrinkage, but when the grain is cut in the state above mentioned, all circulation must of necessity cease, and I have no doubt but the same principle will apply to Indian corn, rye, barley, oats, &c.  
Mayville, N. Y. Aug. 29, 1841. JABEZ BURROWS.

## Mott's Agricultural Furnace Again.

When I gave a notice, last fall, of the above, I did not expect to be called on for any particular information respecting sales, prices, &c. and had no further interest in the business than to introduce it to the farmers. But having received so many letters of inquiry on the subject, and to save me the trouble of answering them individually, I will, with permission, reply through the medium of this paper.

The one I purchased last fall I continued in use during the winter, and have found no reason to alter the opinion then expressed; but on the contrary, I am more confirmed, and do not hesitate, without qualification, to recommend it, with the late improvements, some of which were suggested by R. in the 3d number of the present volume of this paper, superior to any thing, for the purposes intended, which I have ever used, or which has fallen under my observation.

Mr. Mott has lately sent me one of the capacity of two barrels, containing the improvements, which consist in casting "points of attachment" or gudgeons, on the rim or sides of the kettle, "so that with a crane or lever" it may be raised out of the casing and the contents emptied out, and to facilitate which a loop or eye is cast on the bottom of the kettle, so that it can be done without burning the fingers. The flange also, has been extended beyond the edge of the casing, so that if water boil over it will not run down the flues and put out the fire.

There was an error in my former communication, which I take the present opportunity to rectify. I said, "one furnace will suit the different sizes of cauldrons varying from one to four barrels," &c. This arose in copying an advertisement, which referred to the first that was made, where the casing extended only part of the way.

When it is considered that they require only a small piece of pipe to conduct the smoke, they will be found less costly, and take up less room, than those set in brick, when furnace doors, grates, brick, lime, and the inconsequence of obtaining manure, are taken into the account, besides the convenience of lifting off and on to clean the flues or empty the contents.

In answer to a letter I addressed to Mr. Mott, he says—"I have sold them to farmers to boil food for stock—to go to Cuba for boiling sugar—to the upholsters to boil hair—to bakers—druggists—tallow chandlers—to boil and bleach oil—to make starch—to steam and boil wood—to dyers—to the shipwright to boil tar and pitch without the danger of its taking fire, as it may boil over—many have been sold for washing, and I have sent some on whaling and sealing voyages." "My prices are as follows: for half barrels \$11—barrels \$18—one and an half barrel \$21—two barrels \$26—three barrels \$35 and four barrels \$45. The furnace part is made very heavy, so that it will be very durable."

I am sending many into Virginia, where they take well among the planters.

They may be obtained of J. L. Mott, 264 Water-street, New-York; G. G. Heermance, 5 Green-street, Albany; Dudley & Thompson, Buffalo, and W. & R. P. Ruser, Cincinnati.  
CALISE N. BEMENT.

## Sun Dial.

MESSRS. GAYLORD & TUCKER—Will you allow me a small space in the Cultivator for next month to say a few words about the mode of setting the sun dial, as you so favorably noticed in your last paper, and one or two other observations regarding them.

The best and most convenient way of setting them is, after leveling the pedestal or plane on which the dial is to be placed, (being particular to get it level in an east and west direction,) then to adjust a clock or watch to the true apparent time, (either by setting it by another time piece known to be correct, or by equal altitudes or other observation of the sun,) and then at 12 o'clock, M. or at ten minutes before or after, to set the dial true, and make it fast to the pedestal by screws or nails.

They can be placed by setting the stile or gnomon true north and south by a meridian line or a compass, but the foregoing method is preferable.

They are accurate for the latitude of this place, (41° 36') and will be sufficiently so for 150 or 200 miles north of this latitude, and will be entirely correct for any latitude if the dial is inclined in setting, so that the edge of the gnomon that casts the shadow will be parallel with the pole of the earth: in other words, if when the latitude is less than that of the dial, the south side is elevated as many degrees as the latitude is less, and when the latitude is greater, the north side is raised in the same proportion.

Your remark that my manufactory of dials was called into existence by the suggestions of Mr. Walsh, is not strictly correct, as I had been engaged in preparing for making them, for some time before Mr. Walsh's articles met my eye, as will be seen by turning to my note to you in the June Cultivator; but his suggestions hastened the manufacture and I am under special obligations to him for his encouragement and his effort to make them known and introduce them into use.  
Kensington, Ct. Sept. 19, 1841. SHILTON MOORE

## Comments on the August No. of the Cultivator.

The first article upon which I shall offer any remarks is that under the head of "Signs of better Times." I agree with you in all but the second sign—which is in the following words: "Speculation has had its day, and the thousands who have been ruined, have had time to repent at their leisure. The mass of the nation are convinced that honest industry, and slow and sure profits are far preferable to the haphazard and demoralizing influence of such haste to be rich."

It is true that the particular speculations which have ruined thousands have had their day; and that the multitude of victims thereof have had full time to repent. But will they do so,—at least so far as to be effectually guarded against the first and strong temptation to speculate in some untold way? Experience, I think, says—no. For although—even ruin itself resulting from too great haste to be rich, may check them for a while, yet all history proves that those whose hearts have once been poisoned by this most destructive passion,—so appropriately called by the Romans,—the "Auri sacra fames," rarely ever recover entirely. Nothing but the early moral and religious education of our whole people, as it should be, can ever save us from it.

I believe there are many of your readers beside myself, who heartily thank you for publishing the letter of the English farmer—Mr. Jose Hessest. Nothing will tend more to strengthen those numerous ties of interest and friendship which should preserve our two nations in perpetual peace with each other, than the frequent interchange of such communications; and whenever needed, I should rejoice to hear that they were published in every state in our union.

In regard to the proper time of cutting wheat, the very accurate experiments of Mr. Hannam confirm the opinion which, I believe, is now very generally adopted by the best and most experienced wheat growers. The state which Mr. Hannam calls "raw," I understand to be that in which the grain has entirely lost its greenish hue, but will still mash upon being pressed in the hand. And if cut in this state, numerous experiments long ago published in our own papers, prove that it will not only make better flour, when dry, but will weigh more than that which was not cut until "dead ripe," and consequently is better also for market. But it should not be forgotten, that the proofs of "dead ripe" wheat being best for seed, have been quite as numerous and satisfactory. Indeed, it seems to me pretty well established, that it is still better for sowing, if it be kept until it is a year old. It is said to yield more grain in proportion to straw than never seed.

Your correspondent, D. L. of Erie county, N. Y. asks for some information as to the best means of preventing smut in wheat. The kind of smut which he describes is not known in my part of our country. But in regard to that which converts the substance of the grain into a stinking black powder, the general belief is, that if you will suffer your wheat to be "dead ripe" before it is cut, then soak it in strong brine, and roll it in lime, no smut will ever affect it. I have witnessed many proofs of the correctness of this opinion.

Suffer me now to make a few remarks on the communication of your correspondent, "Pearl," of Hinds Co. Mississippi. He will be a Pearl of high value indeed, if he can teach us how to make corn without plowing at all, which if I understood him, has been done, at least in his own neighborhood. His words are,— "In the driest year I ever saw a crop made, (1832,) I saw corn in a field where a part was plowed, and a part a plow had never been in, only a row divided."—"In the plowed part the corn was badly fired,"—in the other part, it was "green to the earth." It is from the words which I have taken the liberty to underscore, that I infer Mr. Pearl knows how to make corn without plowing at all. Now such a mode would truly be a great treasure to all the lazy corn growers of our country; and since it is my misfortune to be one of them, I am particularly anxious to try it in my part of the country; especially since the only plan of the kind that I ever heard of before, most woefully failed with all who tried it. It was sold as a secret by a certain Hibernian, whose name I forget. The price to each purchaser was some forty or fifty dollars, and he actually humbugged a considerable number of very good corn growers, in the Ancient Dominion, until he amassed several hundred dollars, and forthwith decamped. This, you must admit was quite enough to make me somewhat sceptical, as to the possibility of making corn entirely without the plow. But still it is so great a desideratum, that I am not only willing, but desirous to try the plan mentioned by Mr. Pearl, especially as it seems procurable without money and without price.

Without questioning the gentleman's facts, or claiming to know more about making corn than the "old planter," who acknowledged that he could not account for the firing of the plowed corn, I will venture to offer the following explanation. If the ground had been plowed in a wet state, or not until long after the drouth commenced, then the firing of the corn was an inevitable consequence of the operation. As to his cotton experiment, if the plowed part was the worst, it might have been owing to its having been plowed when the land was in an moist state, in which condition it is an actual injury to all plants to stir the earth, either with the plow or any other implement. That corn will grow well "alongside of a large log"—is a circumstance which has been seen by many others besides Mr. Pearl. It is simply because the log keeps the earth moist and pliable,—a state absolutely essential to the growth and health of all cultivated plants, which state must be produced by deep tillage, as it would be neither very practicable nor economical to cover one cornfield with logs, especially in the old states where timber has become scarce. If Mr. Pearl "cannot see how stirring the earth will make moisture rise," he should console himself with the reflection that it is a misfortune common to us all, not to be able to see any thing which takes place underground. But if he means, merely that he cannot understand the why and the wherefore, he and all may say the same, even of our own existence, as well as of millions of other facts in regard to which we have no more doubt than we have of our living, and moving, and having our being. But this business of stirring the earth causing moisture to rise, happens to be one among the millions of other facts which are perfectly comprehensible. The process is called capillary attraction, aided by atmospheric heat, which penetrates the earth to a considerable depth, and deeper when it is in a comparatively loose state, than when more compact and hard. Any man who doubts, unless he be one who will not believe his own eyes, may soon convince himself of the fact, by the following very simple experiments: Let him sink one end of a dry string in any vessel of water, and suffer the other end to hang out side. He will soon see,—not only that the whole string has become wet, but that the water begins to drip and trickle from the outside end. Capillary attraction is the cause of it. Next, let him turn two tumbler glasses bottom upwards, and place one over a wet, deeply stirred spot of earth, and the other in a hard path. Both will soon show moisture on their inside, but the tumbler over the stirred spot will show a much greater quantity than the other. Both these experiments have been made by thousands, and have always produced the effects here stated. Now, if Mr. Pearl, or any other person can prove that in the latter experiment, the stirring of the earth had nothing to do with causing more moisture to rise in one tumbler than in the other, I can only say that, in my humble opinion, he will be well entitled to rank with Sir Isaac Newton himself in the class of Natural Philosophers.

Mr. W. P. Kinzer of Pennsylvania,—"A Young Farmer" from North Carolina, and Mr. A. G. Alsworth of Mississippi, well deserve the thanks of all who are friendly to the establishment of a National Society of Agriculture. Their advocacy of the scheme will somewhat more than balance the hostile attacks of your correspondents "Northern New-York," from Ballston, and F. Burt of Ohio, who are the only two enemies that have yet publicly avowed themselves. If none more formidable should appear, I think there will be little difficulty in predicting a favorable result.

Mr. J. R. Moser's humorous account of what he calls "The Skinning System," which prevails in some parts of North Carolina, is a happy illustration of the effects of very shallow culture. But a man has only to travel through some parts of Virginia and Maryland, to find a full match for it. Fortunately, however, for the cause of agriculture, the land-skinners are men who either will not, or cannot read. There is no hope of their reformation so long as they willfully continue in this state of deplorable ignorance. But their number is slowly decreasing, and therefore we may reasonably hope—will soon be extinct.

In Mr. N. Sutherland's enumeration of the various methods by which wheat may be converted into cheat, he has omitted one which I beg leave to add, as I have seen it more strongly recommended than any other I have yet heard of. It is, to have the wheat grazed down by geese if they can possibly be procured.

Your quotation from "The Tennessee Agriculturist," has something in it so marvellous, that the editor, I hope, will pardon me for asking a few questions. Has he himself ever seen a horned snake? If not, why does he say, "it is true," there is really a serpent so called? No museum I believe, has yet any such curiosity in its "Agassiz," whose appearance was it, on the small end of the "six or eight foot pole," that he saw, by a rattlesnake "at the base end," that he saw in "a few seconds" after the stroke, and supposed to be the poison of the rattlesnake? How did he know it to be the poison? Might not the appearance have been caused by something else? I cannot believe it was the poison for this reason. If the virus of a rattlesnake could travel through a green pole at the rate of six or eight feet in a few seconds, would it not be diffused through a human body with equal rapidity? And if so, how could any person who had been bitten, possibly escape death, as they often do in cases where some hours elapse before the usual antidotes can be applied? These considerations induce me to believe that whatever the editor of the Tennessee Agriculturist saw at the small end of the green pole, it could not have been rattlesnake poison.

## Culture of Forest Trees.

To Francis H. Gordon, Esq. Tennessee:

Sir—Not having seen any answer to your inquiries in the May number of the Cultivator, for "accurate information on raising chestnut timber from the seed, and red cedar from the berries," I take the liberty of respectfully submitting that, when a boy, I remember to have often searched for seedlings under chestnut trees, in the spring of the year, pulling and eating the nuts that had germinated after having lain upon the ground through the winter, buried under the leaves. I have noticed that walnuts, hickory nuts, acorns, &c. germinate in the same manner. Taking nature, therefore, as the best guide in these matters, I would say, plant all kinds of the nuts in autumn, before drying, in holes of the soil, for notwithstanding the chestnut cones are naturally to delight in poor soils, there is no principle better established in timber growing, than that young trees should always be raised on good land, so as to carry a stock of health and strength with them from the nursery. Cultivate in nursery two years, and then plant out where to stand, six feet apart, early in the spring. It is asserted positively, by experienced English planters, that where the reproductive timbers, as the oak, chestnut, &c. are well managed in this way, they will be larger at seven years old, of nursery culture, and the tap-root cut when transplanted, than at ten years old from seed planted where the timber is to stand.

I have tried, in vain, for two seasons past, to grow chestnut trees by engraving the scions on oak roots. A neighbor of mine had sent him from New-York, last year, a thousand, I think, of the scion or Spanish chestnut, about four hundred of which have succeeded. They came boxed in sand, which is the most approved method, I believe, of packing the seed, and this must be done when fresh gathered. Nuts and acorns intended for seed, must never be suffered to become dry or even wilted.

Relative to the red cedar berries, I am unable to say whether they vegetate the first season, or like the holly, hawthorn, and others, not until the second. If on trial you shall find they do not come the first season, I would suggest that they be treated after the manner directed by Phillips, in the Syria Florifera, for causing the berries of the holly to vegetate the first season, which they will never do unless when they have passed through the stomach of fowls. He says:

"We have therefore only to give them a similar fermentation by art to that which nature gives them in the body of birds, to enable us to raise plants in one year instead of two. For this purpose, take a bushel of bran and mix it with the seeds in a tub, and wet it with soft water, and let it remain undisturbed for ten days, when it will begin to ferment. It must be sprinkled occasionally with warm water, to keep it moist, and in about thirty or forty days, the heat of the moistened bran will put the berries into a state of vegetation fit for sowing. March is the best season for sowing, and September, (in England,) the proper season for transplanting young hollies, but in cold moist soils they may be safely transplanted in the spring. Mr. Evelyn says, he has raised hedges four feet high in four years, from seedlings taken out of the woods, which should induce us to make more frequent trials of raising fences of this prickly plant."

To the farmers of this prairie country, there is no subject that commands itself more forcibly to their notice than the growing of valuable timber and the rearing of live fences. I, for one, am endeavoring to make some advances in this line, but labor under great embarrassments for want of choice timber seeds. Should a National Agricultural Society be formed, I think there might be established a general seed depository of native and exotic plants of great utility. Another legitimate object would be the publication of a concise manual on planting. This business of cutting down and destroying timber is to have a limit, and the whole country will be eventually renovated like the British Isles, with a choicer growth. It is wise in a national point of view to begin when young, for our live oak is not inexhaustible, and our rail roads and canals every day demand more and more valuable timber in their construction and repairs. Our numerous steamboats too, particularly on the rivers of the west, playing night and day for weeks against the current, should be constructed of better timber than grows here now. In fine, there is no use to which timber is applied, from the common uses of fencing to those of ship building, that would not be greatly subserved by giving to the subject of timber planting that consideration justly merits, as one of the concomitant concerns of agriculture.

M. L. KNAPP, M. D. P. S. I see, by referring to page 90, June No. of the Cultivator, that the editors in answer to Hugh Gaston, have given the process for cultivating the cedar from berries. I will not, however, withdraw my quotation from Phillips, as he is good authority, and his receipt may be useful in reference to seeds which require two years for germination.

May I avail myself, Messrs. Editors, of this opportunity, there being no depository of timber seeds, or system of exchange, to solicit information through your widely circulated

periodical, from farmers of various localities, where any of the undermentioned species of timber may grow, and who will engage to put up for me, and deliver at some point of shipment, the seeds of the chestnut, beech, American poplar, white and red cedar, white and pitch pine, American larch or hackmatack, hemlock, holly, osage orange or box-wood, white mulberry, and the hedge shrub called pyracantha. I am anxious to obtain all of these the coming autumn, and to test the growth of the evergreens, particularly on these prairies. I think the above, added to what I have and can obtain in this locality, to wit: the different varieties of oak, the hickory, ash, maple, black and white walnut, pecan, cottonwood, linden, black and honey locust, elm, sycamore, coftenut, buckeye, hackberry, catalpa, cherry, black, Chinese and Alpine mulberry, white thorn, and Judas tree, will make a grove of mixed woods, worthy to grace a prairie; and I will be under particular obligations to you, Messrs. Gaylord & Tucker, and those who through your columns, engage to aid me, besides paying for the seeds and holding myself bound in courtesy to answer exchanges.

Middletown, Ill. August, 1841.

M. L. K.

## Mr. Prentice's Farm—Short Horns, &amp;c.

Mr. L. Tucker—While spending a day in your good city of Albany, a short time since, you were so kind as to invite me to ride with you to view the beautiful farm and country house of Mr. Prentice, two miles below. What I there saw, savored so much of improvement in all that tends to exalt our agriculture, as well as of good taste in embellishing the rural resting places of our opulent men, that I shall be excused for trespassing a moment on your columns in noticing it.

I can only speak of the charming villa and farm of Mr. P. by remarking, that it is in all respects such a spot as a gentleman of wealth, good taste, and of strictly antislavery notions, would select for a country residence, where he could at his ease and leisure enjoy an almost unbounded, yet well defined and delightful landscape, surrounded with all the luxurious appliances by way of buildings, garden, orchard, park, and farm, which even a wide ambition would desire, and where, I hope, he may long enjoy the intelligent and sensible pleasures which he has already drawn into his possession. I was charmed with the grounds, the fruits, and the flowers, which the politeness and kind attentions of the owner pointed out to us, and more than usual with the beautiful landscape which ever spreads abroad from the crowning hills of your glorious Hudson. But what most engaged my attention was the noble herd of

## Improved Short Horns,

which Mr. Prentice has for the past five years been collecting, principally from importations of his own, at great expense and labor, from England. His herd now consists of between thirty and forty as fine animals as can be found, I venture to say, in any herd of an equal number in the United States.

They were in excellent condition, which was the more surprising, that there was scarcely any feed in the pastures; and he assured us that they ate nothing besides the scanty herbage growing upon them.

Among so many beautiful animals, it is difficult to remember names, and I took notes; but I cannot omit to name one individual and his produce, that struck me as a remarkable instance of the value of a fine and fortunate cow. His "Matilda," if I mistake not, seven years old, with her six *keiser* calves and their produce, exhibit the most beautiful as well as remarkable specimen of an entire Short Horn family that I have witnessed. Few animals can equal them in excellent points, and still less exceed them in the ripeness, maturity, style, and fashion of their appearance. Several of the cows, Mr. P. informed us, were extraordinary milkers, one or two giving for weeks together, as high as thirty-two quarts of milk per day, a quality, however, characteristic of the Short Horns. Mr. P. has been eminently successful in crossing his fine bred cows with a stout and vigorous bull, "Leopard," from the Patroon's stock of Short Horns, which as a herd, although somewhat coarse, are of great size and most vigorous constitution, and making a capital cross with finer and finer bred cows. This experiment Mr. P. has tried with great success, and I shall be disappointed if some of the best animals in our country do not date their origin or descent from his herd.

Among the cows, were several that were imported during the last two or three years, from some of the best stocks in England, and Mr. P. informed me that four more are now on their way from thence to his farm. It is needless to remark on the high public spirit of such efforts at this peculiar time, to improve at great expense, the stock of our country, when sales of high bred animals are so remarkably dull, and the spirit of improvement seems almost ground under by the extraordinary depressions of the times. Few individuals, indeed, are so patriotic as Mr. P. under such circumstances; yet I trust he will find his reward. It is owing to the exertions of such men, although often ridiculed by the many, unthinkingly, that our agriculture has for some years past made such ample progress.

The seekers of fine stock should visit the herd of Mr. Prentice, and as he offers a part of his herd for sale, among which are several likely young bulls, at low prices, they will hardly fail of suiting their wishes if the acquisition of good stock is their object.

In addition to his cattle, Mr. P. has a choice flock of South Down Sheep, imported from England by himself, and equal to any that I have seen. These bid fair as a mutton sheep, and the producers of a good farmer's wool, to take the place of all others on the common soils of our country. I also noticed several excellent Berkshire sows and pigs which have been bred on the farm for several years, and of a superior quality. These fine animals, I am pleased to say, are superseding all other breeds of swine, among the truly intelligent farmers of the United States.

Leaving Mr. Prentice's, we rode on to take a view of the

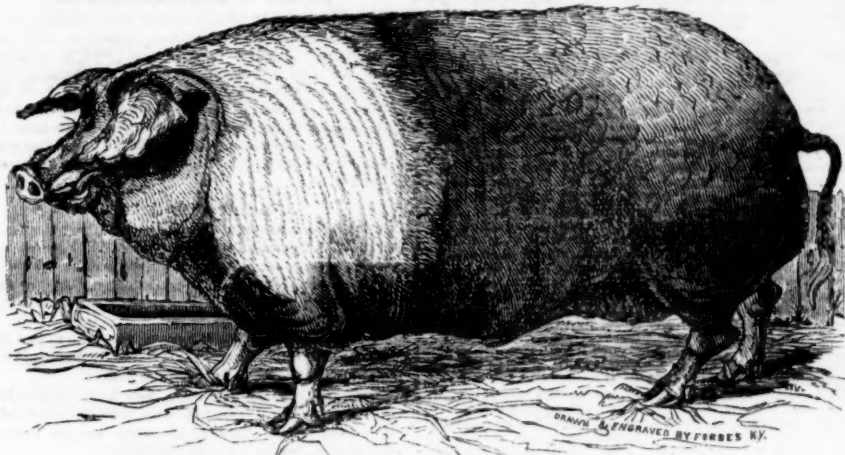
## Hereford Cattle,

of Messrs. Corning and Southam. These were in fine condition, although suffering, as were Mr. Prentice's, from short and dry pastures. Having seldom seen any of this kind before, they struck me as being a fine and superior breed of cattle for beef, and for laboring purposes, and well adapted to a prolific grass region where the rearing of cattle is solely an object. The cows of this breed cannot to appearance, be great milkers; or very superior ones; and although they are beautiful in form and look, and a few of them possessed extraordinary points of development in excellence, yet as a whole, I prefer the well tried Short Horns, certainly thus far proved to be the best milking cows in the world. Still I will not condemn the Herefords. As working oxen, the Hereford bullock must be an animal of great honesty, strength, and beauty; and for beef, and aptitude to fatten, perhaps has no superior; but the absence in them of that most desirable of all, the milking quality, enhances in my estimation over any others the improved Short Horns.

Our return from this pleasant recreation brought us into your "Cultivator" office, where I could have spent many pleasant hours in conversation, and in looking over at my leisure your capital collection of agricultural works, plates, magazines, pictures, models, &c. and which I commend to all lovers of good agriculture, as they visit Albany. In due time, I hope to see you on your own farm, as every agricultural editor should be, surrounded by your own superior stock and husbandry, and giving practical lessons monthly to your readers, derived from your own experience.

L. F. A.





MR. STARR'S WOBURN BOAR.—(Fig. 82.)

**Messrs. Entores.**—Agreeably to my promise, I send you a cut of the Woburn Boar in my possession, which took the first prize at the last fair of the American Institute in New-York. This animal was imported from Woburn, in England, and is considered by many judges of stock, to be the finest specimen of swine in the United States. Two members of the committee, to award prizes on stock at the last Fair of the American Institute, informed me since that they considered him a perfect animal, and could not point out a fault. By the way, these two gentlemen are not interested in any particular breed of swine. His measurement at twenty-two months old, was 7 feet and 8 inches long, 6 feet 2 inches in girth, and 2 feet 8 inches high; and he was supposed to weigh nearly seven hundred pounds. From the great difficulty of obtaining swine of this breed in England, few have been imported, and they are not extensively known in this country.

The Complete Grazier, (a work on live stock, published in London) says of the Woburn breed, "This is a new variety, introduced by the late Duke of Bedford; its size is large, and color various. These swine are well formed, hardy, kindly disposed to fatten, attaining nearly twice the size and weight of other hogs, in a given period of time."

Rees's Cyclopaedia describes them as "a hardy, well formed, prolific sort, rising quickly to a large weight."

An importation of Woburn swine was made several years since to Long Island, and they were nearly all destroyed by the burning of the barn in which they were kept.

A gentleman in Connecticut had obtained some of that stock, and not knowing the name of the breed, called them Norfolk thin rind; they have been crossed with native stock, and are very celebrated in that section of the country. One was slaughtered last fall, fourteen months old, which weighed, when dressed, four hundred and eighty pounds. The steward of the Duke of Bedford, last spring informed Captain Morgan, of the London line of packets, that the Woburn hogs became so fat as to be objectionable on that account. In this country, where Indian corn is used for making pork fat and solid, instead of barley and buckwheat, the objection of the Duke's steward does not hold good, and if any farmer does not prefer fat hogs, he is welcome to propagate the Landpike and Alligator sort.

If any of the readers of your paper, wish to obtain any pigs of the pure Woburn breed, they can be supplied by application to me.

A considerable number of this stock have been forwarded to some of the Southern States, and have given great satisfaction.

CHARLES STARR, Jr.

Mendham, N. J., August, 1841.

#### Silk Business in Ohio.

**Messrs. Gaylord & Tucker.**—I am advised by our friend Judge Lane, of this place, and others who have witnessed our operations of late in feeding worms, and manufacturing sewing silk, to communicate to you for publication, a plain statement of facts, from our commencement in this business, until the present time. The improvement that we have made is considered of great importance to our country. The article accompanying this, with the certificates, were first intended for the Cultivator, but owing to the anxiety of a number of individuals in this place, it was published for the first time yesterday, in one of our newspapers. I forward you a copy, wishing it to be published in your next number.

Norwalk, Ohio, Aug. 26, 1841.

J. B. TILLINGHAST.

This may certify, that four years have passed since I first commenced feeding the silk worm, and have annually increased my stock of trees to half a million. Notwithstanding my success the three past seasons exceeded my expectation in this new branch of business, until the present season, I found some trouble and difficulty and much anxiety in the last stage of the worm before winding, which has led me to adopt a new mode of feeding.

In the first place, in the old way of feeding a large crop of worms, directly after the fourth moulting, so much food is necessary, that much hurry and confusion is unavoidable. And in the second place, much labor is required in frequent changing, in order to keep them clean and healthy. And, thirdly, the difficulty of preparing, in proper season, suitable fixtures for making their cocoons agreeable to the natural instinct of their species. In taking all these difficulties into consideration, I finally came to this forcible conclusion;—unless some material change should take place in the management of the worm, in the manner of feeding, &c., this important branch of industry could not well be carried on to much advantage in this country; therefore I ventured the following experiment:

I feed my worms as formerly in our nursery room, as we call it, about 20 by 40 feet, upon thin board shelves, two and a half feet by four, until they arrive from their fourth moulting; at which time they are removed upon those shelves into the cocoon room with the litter that has accumulated since the third moulting. The said cocoon room is constructed long and narrow, 140 feet long and 18 wide, and as low as will admit of convenience. The frame of this building consists only of hewed posts and rafters, set six feet apart. The posts are well set in the ground and the common earth constitutes the floor. The feeding frame is four feet wide, to admit the feeding shelf the longest way, and extends the whole length of the room, except intermediate spaces for storage of foliage. This room is intended to feed, by cutting whole trees, from one to six feet in length, by laying them upon the worms with their foliage. The feeding frame is suspended from the rafters about three feet from the ground, and one tier of frames on each side, two feet from the wall, which leaves six feet alley through the middle, sufficient for a hand-cart to pass with foliage. Two tier of side boards, hung with leather hinges the whole length of both sides constitute both doors and windows, and admit of both light and air; the lower one is hung close to the ground and opened for the passage of the litter, which is very soon removed with a hoe or rake. The feeding frame is made of sawed stuff, one and a half inches by three, and moveable slats of about one inch square, placed at suitable distances to support the trees and worms as they rise from the shelf below, which is supported by buttons: as soon as the worms leave the shelf, it is let down to the ground with the litter. The worms are left with a free circulation of air, and their excrement falls away from them to the ground. The trees are crossed when laid on, which makes a most suitable place for their winding, and remarkable for their being formed single, and less floss than any other fixture I ever saw.

Actual experience has demonstrated the present season, that two hundred worms can be well fed upon every square foot of this frame, and if the whole should be filled at once we should have 200,000 to finish their work every two weeks, and the whole feeding and attendance may be conveniently done with-

out hurry or any difficulty with the help of two men and two boys, ten years old, to pick leaves, gather cocoons, &c.

I believe it to be a safe and prudent calculation, from what we have done and are now doing, with the help we now have, that in three months' time 1,000,000 of worms may be well carried through. As we have had worms hatching about every day since we commenced the present season, and consequently some winding continually, we are quite certain of success with every brood we hatch, if we know our eggs to be from a healthy stock and in good condition. This is all important to every silk grower. We are daily witnessing the great contrast. Eggs from selected cocoons of our own raising have done remarkably well through the season, from hatching and winding, and those we obtained, that were not selected, more or less died in their periods of moulting, and some would die just before winding.

We have good reason to believe that the principal cause of many failures may be attributed to the care of selecting or manner of preserving. We are now selecting our best cocoons for our own stock of eggs for the next season, and contemplate to feed 2,000,000 from five acres of trees.

From the commencement, I have calculated to reel our own cocoons as soon as practicable for the manufacturers. In visiting reeling establishments, where water is heated by steam, I thought I observed the difficulty of treading it, by heating with charcoal in furnaces. I concluded to try another operation, by making a wooden box of 2 inch plank, perfectly tight, by making use of sheet iron for the bottom. Said box is 4 feet long, 2 feet wide, and 1 foot deep. This constitutes the boiler, set on a brick arch, with a flue connected with the flue of the chimney. My small flature consists of three of the Piedmont Reels and one spinning machine of three spindles, with the boiler and apparatus for heating water in the reeling pans, are all situated in a common dwelling room of 16 feet square. I have a wooden trough, made of 2 inch plank, 9 feet long, 16 inches wide, and 10 inches deep, raised 2 feet from the floor, tin pans with partitions fitted to the inside of the trough, of convenient length for each reeler. A two inch tin pipe is started from the top of the boiler through the plank and is carried over the top to the bottom of the trough, running four times the length, under the pans, and out at the bottom through the ceiling outside; also, another pipe for letting off the water from the trough.

The same water may be used several days without changing; and in about one hour from the time the fire is started under the boiler, the water is heated by steam the right temperature for common reeling, and continues to keep its temperature with very little tending. It answers the purpose intended admirably. In five weeks from the time the eggs are hatched, the silk is converted into sewing, not much inferior to the best Italian. We expect the foregoing improvements will soon be patented.

We are very much gratified with the token of approbation received from our numerous visitors, and yet would be pleased to wait on all as far as our time will allow, and spare no pains to impart information in this business, as far as we find ourselves in possession.

Norwalk, Aug. 16, 1841.

J. B. TILLINGHAST.

All communications by mail, for information, must be post paid.

#### Farmers, cut your Fodder.

**Messrs. Gaylord & Tucker.**—As the great mass of farmers in this vicinity appear to be ignorant of the advantages of making use of cut feed for their stock, I will give you the outline of my experiment this season, hoping that it will be the means of inducing many others to make a trial. It was sometime in February last, that I procured an improved Straw Cutter, (Gibson's Patent) having a quantity of dry straw, and knowing I should be short of hay, I concluded by making the best use I could with my straw, I could with little labor make a saving equal to a ton of hay, worth \$15; and thus save more than one half the expense of the machine this season. But the result is much more favorable, for in addition to my rye straw, I had about three tons of coarse fodder, consisting of different proportions of swamp hay, rye, wheat, buckwheat, and pea straw,

to this mixed mass I added as I cut it, about one-fourth part good hay. I fed this to my cattle, (16 in number), just as it came from the machine; they fed on it with a good relish, appeared satisfied, and rather improved in condition. Instead, therefore, of saving only half the expense of my machine, I have saved more than the first cost, (\$20,) and had I obtained one last fall, it would have saved more than \$50.

I verily believe that one-third more stock might be kept on farms generally by our would be economical farmers turning to good account all their coarse fodder. By obtaining a good machine, I have saved three tons of good fodder which otherwise would scarcely have been worth three hundred of good hay.

To my team horses, one spin, I give 20 quarts ground oats with as much cut straw as they will eat; they prefer this feed to clear oats, and are in first rate working order. The length I cut my straw, &c. is three-fourths of an inch, although I see no objections to cutting it longer for cattle. Brother farmers, are not these things worthy your attention? Will you try the experiment? Purchase some good machine; every farmer ought to have one.

Bennington, Vt. May 15, 1841.

RICHARD FISK.

#### Hydraulics for Farmers.

In the 47th vol. and 7th page of this paper, I made a communication, setting forth the great "Importance of water in cattle yards," and gave a description for a simple apparatus for conveying water from a small stream, lying 80 feet below and 40 rods distant from my house. Further experience only convinces me of its great benefit and importance; and the object of this communication is to introduce a new and very superior double action forcing pump, manufactured and erected for me, by Messrs. Tucker & Richmond, of Troy, N. Y. who I most willingly recommend to those persons who feel desirous of procuring a good and substantial article for raising water, either by water, wind, animal or manual power.

They are also about manufacturing a new lift pump for wells, which, from the specimen shown me, in course of completion, appears to be a very efficient, and from the manner of its construction I should think, durable one. The working part is of metal, and placed in the well below frost.

The forcing pump I first put in operation was cheap and simple; yes, too cheap, and so simple it was rather troublesome to repair when deranged. One difficulty was the connexion of the pump with the discharge pipe, which was effected by means of a leather hose secured by winding a cord tight around it, instead of being coupled with screws. The simplicity of winding and unwinding the cord when it is necessary to take it up and put it down again is tedious and troublesome, and the hose laying constantly in the water requires to be repaired from three to four times in the course of the year.

Before engaging my present pump, I made a visit to Winthrop Phelps, Esq. in Chatham, who has in successful operation, a very superior apparatus, which is also figured and described in the 11th number of the 7th vol. of this paper. This apparatus was furnished by D. L. Farnam, Esq. of New York, the inventor of the pump, but was erected by Mr. Richmond, one of the above firm, who was then in the employ of Mr. Farnam. Mr. Phelps awards to Mr. R. the credit of arranging and erecting his apparatus; is well satisfied with its operation; does not regret the expense, and would not be deprived of it for any consideration whatever—in short, would hardly know how to get along without it. It has been in operation nearly two years and never been out of order or ceased to work well, until a few days before I was there, when he was obliged to put new leather on the piston, which he said took him from fifteen to twenty minutes.

I was delighted with its operation and surprised to find how small a quantity of water, when properly applied, (all of which would apparently pass through a two inch tube with but little pressure,) it requires to force water 35 feet high and 400 feet distant. The water wheel is 9 feet in diameter, and the buckets 12 inches wide. The pump is worked by means of a crank, which is attached to the end of the shaft, and the whole so well adjusted, it works so still, that, standing outside of the building, one would not mistrust it was in operation.

The pump I have now in operation is of the same size and construction as the one of Mr. Phelps, and is worked by a very poor wheel, being only two feet and eight inches in diameter—buckets twelve inches long with a head of only three feet, (all the water that runs on to the wheel passes through a round tube three inches in diameter,) and throws up about 6000 gallons per day into the reservoir, from which my house, stable and poultry yard, as well as my cattle-yard, sheep-yards, and pigsty, are abundantly supplied, and the waste water passing off into a lot which was heretofore without water.

It has been suggested that lands favorably situated may be irrigated by means of one of these pumps.

C. N. BEMENT.

Three Hills Farm, Sept. 4, 1841.

#### Beast's Tails.

There are several chapters on the subject of sheep, over the signature of L. A. MERRILL, in the June number of the Cultivator. I am pleased to have, with his theory of "humanity to brutes," and commend him for his "merciful kindness." Every operation necessary I would have performed in the most tender manner. But as to his cutting off lamb's tails "as short as possible," &c., "to prevent the trouble of tagging," I protest against it as unnecessary and useless. I keep sheep, and the wool that grows on their tails will pay all the expense of tagging for the year. I would ask Mr. Merrill whether it was the same "dog of nature that provided the animal for our use and benefit," that gave the brute a tail to brush the flies and secure the tender parts from the burning sun and wintry blasts? If it was, for Heaven's sake, for decency and humanity sake, let the creature wear its tail. "What looks more ungentle and absolutely vulgar than a sheep" without a tail? Witness the horse with a long flowing tail provided by a kind Providence to protect, balance, and form a useful part. Then see him with one half of it cut off, and the other part of it cut half off in several places, leaving a trembling stump—for what, except to gratify a jockey's fancy? Then see how it detracts from his comfort, beauty and strength. See the handsome curl in the hog's tail! It is the only sure sign he exhibits that he is thriving; but many are cut off to gratify a superstitious whim.

Norwich, Ct., July 31, 1841.

C. BLISS.

#### Relief of Choked Cattle.

**Messrs. Entores.**—Having by accident discovered a way to relieve cattle when choked by attempting to swallow too large a piece of ruta baga, or other roots, I thought I would communicate the process of relief to the Cultivator. Some two or three years ago, my beef cow got choked with a turnep, and having tried the usual mode of pouring soft soap down her throat without the desired effect, I concluded to butcher her before the turnep had done its work: she had fallen down before I could get a knife ready, so I took hold of the fore leg to turn her in a better position for opening the veins in the neck, when I perceived that she was relieved and soon got up. I attributed it to drawing the fore leg forward and out from the body.

I have recommended the same process to my neighbors, some of whom have tried it with complete success. I would suggest that each fore leg be pulled alternately.

Yours respectfully,

DAVID F. LOTT.

Newton, N. J. August 16, 1841.

## The New-York Market.

## MONTHLY REPORT FOR SEPTEMBER.

(Prepared for THE CULTIVATOR.)

**ASHES.**—The demand for Pot Ashes has been during the past month, very brisk, and the receipts continuing to be light the market has been very firm. In the early part of the month both sorts, Pots and Pearls, were at \$5-75, but the small quantities arriving and the favorable news from England induced buyers of Pots to advance their pretensions, to which holders were forced to submit, while Pearls remained stationary at \$5-75. Within a few days, however, an increased demand has been experienced for Pearls, which has induced higher demands from holders, and sales have been made of considerable parcels at \$6-00, at which price the market is fully established. Pots have steadily advanced to \$6-25, and at that price all the receipts are freely taken for export. The news from Liverpool for the last steamer was favorable, the market was firm, and sales had been made of 700 or 800 bbls. Montreal Ashes at 28s. 6d. for Pots, and 29s. for Pearls. The market here, in consequence of these advances and of the limited arrivals from the interior, has still a tendency to advance, and should not the stock be largely increased, the coming month will no doubt see Ashes at a higher figure. It is a very unusual circumstance to find Pots selling at a higher rate than Pearls. The export to the 14th inst. were, Pots 487 bbls., Pearls 151 bbls. The amount received from the opening of the canals to the 18th inst. was 23,460 bbls. Stock on hand 18th inst., Pots 563 bbls., Pearls 1460 bbls. The stock of Pots is small, almost beyond precedent.

**COTTON.**—In the early part of the past month each successive arrival from England brought accounts of a more and more disastrous state of affairs in relation to this great staple, and the market here, in consequence, was very heavy and had a continued tendency to decline. Previous to the arrival of the Great Western, however, the market acquired a considerable degree of firmness, and sales were to considerable extent at very full prices. The advices by that steamer were considered rather favorable, and the better feeling prevailing in the market continued to be felt until the arrival of the Caledonia with advices of a decline of 1-1/2 lb. at Liverpool. This checked operations, and buyers demanded lower rates. Holders, however, declined submitting to a reduction, and as lots were not pressed on the market and sellers evinced no intention of accepting the bids made, buyers were forced to come in to the market at previous rates. The business since the arrival of the Caledonia has not been heavy, but the prevailing quotations show no decline of the prices current before her news was made public. The receipts from the 1st to the 23d inst. have been 2923 bales. The exports from the 1st to 15th inst. 516 bales. The total export from the U. States since the 1st Oct. last, 1,299,742 bales. Same time last season 1,847,108 bales. Same time year before, 1,063,997. The current rates are, Upland and Florida 7 @ 10c., Mobile 8 @ 11c., N. Orleans 7 3/4 @ 11c. The estimates of the coming crop differ very widely, but there is little doubt that it will be a large one, probably not far from 1,900,000 to 2,000,000 bales.

**FLOUR AND MEAL.**—The receipts of Flour from the interior have the past month been somewhat larger than during the previous month, and during the first two weeks the market exhibited little firmness or activity. The sales were merely to supply immediate wants of the trade, and for shipment to eastern ports at \$5-50 @ \$6-12 for Genesee, and \$5-50 @ \$6-12 for Ohio. For a day or two previous to the arrival of the Britannia, the market became more firm and considerable parcels changed hands at \$6-75 for Genesee, and \$6-50 @ \$6-62 1/2 for Ohio and Michigan. Early on the 3d inst., before the advices by the Britannia were generally known, sales were made to some extent at the prices of the day before, but subsequently when the news became disseminated that the English harvest was in a very precarious condition, and that large orders had been sent by the steamer for Flour at high rates, holders advanced their pretensions to \$7-50 @ \$7-75 for almost every description, and during the prevalence of the excitement several sales of Genesee took place at \$7-50, and of Ohio at \$7-25 @ \$7-50, mostly on speculation, as the English orders were limited at a much lower rate. This feeling, however, soon subsided, and the market closed heavily. Later advices from England state that the harvest will be much more favorable than was anticipated, and consequently the demand for foreign bread stuffs will not be so extensive as was supposed. These advices have had the effect of depressing our home market, and prices have gradually declined until they reached a lower point than at the opening of the month, Genesee and Ohio selling as low as \$6-25. Within a few days, however, a reaction has been experienced to some extent, and there are now no sellers of Genesee at less than \$6-25 @ \$6-30, and there appears among the receivers to be not much anxiety to make sales at that rate. Ohio is selling at \$6-37 1/2 @ \$6-45, Michigan \$6-25 @ \$6-37 1/2. The demand is fair, but, as is usual on an advancing market, the sales are not very large. A parcel of 2000 bbls. Genesee was taken on Monday last for export to Liverpool at \$6-37 1/2. The freight was obtained at 6d. 1/2 bbl. Until we get decisive accounts of the extent of the demand to be expected from Great Britain for bread stuff, it will be difficult to make any plausible conjectures of the prospect of the Flour interests during the coming season. These accounts we shall soon get. Southern Flour has been very inactive during the month, and the market has been very lightly supplied. There has, however, been an improved demand within a few days, and the market is firm at \$5-50 @ \$5-62 1/2 for Georgetown Howard-street and Brandywine. The market is almost entirely bare of other descriptions of Southern. The stock of Brandywine is fair, but it is small of Georgetown and Howard-street. Corn Meal and Rye Flour have fallen off slightly, and are very dull. The former in punctuations, Brandywine, has been sold at about \$15-00 or \$15-50, and in bbls. could probably be bought at \$1-75. Jersey in bbls. brings \$3-50 @ \$3-62 1/2. Rye Flour is dull at \$3-50 @ \$3-62 1/2.

**GRAIN.**—The quantity of Wheat offering since our last report has not been great, and the price has gradually advanced. The last sales (on Tuesday last) were of 1700 bushels prime old Genesee at \$1-50 for shipment, 4,300 do. at \$1-47, and 1200 new Virginia, for milling, at \$1-40; another parcel offered at the same time was subsequently sold in Albany. It is doubtful if these rates could be obtained for further lots, as Wheat at \$1-50 makes Flour cost \$7-50 @ \$7-75 bbl. There is a fair demand for Wheat for shipment to Nova Scotia and the West Indies, but at the present high rates shippers generally are unwilling to operate. The receipts of Corn during the month have been more plentiful, and this fact, with the cessation to a considerable extent, within a week, of the demand for the supply of Eastern ports, and the disinclination evinced by distillers to come into market at the present low rates for Whiskey, has produced a heaviness in the market, and holders have found it difficult to make sales at a reduction of 3 to 5c. bush. Sales of Northern have been made at 76 measure, and it is freely offered at 74 weight. Jersey sells at 74 @ 75 weight. The market has been bare of Southern for some time past. We shall probably begin to receive new corn about the last of October. Northern Rye has continued during the month in brisk demand with a light supply, and has for some time been firm at 75c. @ 75 1/2 at the boats, and 76 1/2 delivered. We have received several small parcels of new Rye, and about the 1st Oct. it will arrive in considerable quantities.

Oats have been in steady demand without material variation. The supply is just now abundant, and the demand has fallen off. We quote the Northern dull at 45c. for new, and 50c. for old. There has been no Southern Oats at market for some weeks. The season for Barley is approaching, but no estimate can yet be formed of the price it will open at.

**PROVISIONS.**—There is but little change to notice in these articles. The immense stock of Pork which had accumulated here to an amount never before known, has been somewhat reduced, but not to an extent sufficient to affect prices materially. The demand for export is still limited, having been from the 1st to 15th inst. only 1,564 bbls. The market since our last has remained steady at \$8 @ \$10 for Ohio Prime, and Mess \$8-37 1/2 @ 10-37 1/2 for N. York State, and \$9 @ \$11 for Lower Country. For home consumption the demand, both for Pork and beef, has been languid, and the latter has suffered a slight decline. Sales Prime have been made at \$8-50, and Mess at \$9-50, for City inspection. Country inspection has been sold at a lower rate. For Lard there has been lately a brisk demand at improving rates, but within a day or two the inquiry has been less active. Prime Western brings in bbls. 7 1/2c. and in kegs 7 1/2c. @ 7 1/2c. Northern brings 9 1/2c. @ 9c. Pickled Hams sold at 5c. @ 5 1/2c. Smoked do. 4c. @ 5c. and Shoulders 3 1/2c. For Goshen Butter there is a good demand at 20c. and the receipts are not large. For the common quality 14c. @ 15c. is obtained. The shipping qualities are at 11c. @ 12c. The stock is fair, and prices will hardly be sustained during the next month. Cheese has advanced, and good sells freely at 6c. @ 6 1/2c.

**RICE.**—The high rates at which the article has been held at the South, has, to some extent, prevented shipments to the North, and the drain upon the stock here for shipment and consumption, has reduced it very low. The demand is good, and through the month the rate has remained firm at \$3-57 1/2 for first best. Most holders now demand \$4, and some small sales have been made at that rate.

**SEEDS.**—The inquiry for Clover for export has entirely ceased, and for home demand the article is out of season. The market however, is firm at 9 1/2c. @ 10c. lb. The stock is not large, and the rate is above the views of buyers. Timothy has declined in consequence of a light demand, and is freely offered at \$18 @ \$20 per tierce. The quantity of Flaxseed arriving is very small, and in consequence of the rise of 15c. per gal. in Linseed Oil, which has taken place recently, sales could probably be made at \$10-50 @ \$10-75 per tierce to the crushers. The arrivals of Foreign have of late been trifling.

**TOBACCO.**—The market does not exhibit much animation, and the operations are mostly in small parcels, and at auction. At the last auction sales 15 bbls. low quality merchantable Virginia brought 4 3/4c. @ 5 1/2c. averaging \$5-08. Twelve bbls. Kentucky, put unmerchantable, brought 4 3/4 @ 5 1/2c. averaging \$4-96, and 6 bbls. do. merchantable, brought 5c. @ 5 1/2c. averaging \$7-17. For Manufactured there is but a very limited inquiry for export, and for home use the sales are only in retail lots. The quotations are, Richmond and Petersburg 5c. @ 5c.; North Carolina 5c. @ 6c.; Kentucky 5c. @ 10 1/2c.; Manufactured, No. 1, 12c. @ 15c.; No. 2, 10c. @ 11c.; No. 3, 8c. @ 12 1/2c. Do. 32 lumps 16c. @ 20c.; Ladies' Twist 16c. @ 20c.; Cavendish 10c. @ 40c.

**TALLOW.**—For City rendered, the Butchers are asking 9 1/2c. but sell occasional lots at 9c. to go out of the market. Other descriptions sell freely to manufacturers on arrival at lower rates. The market is bare of Foreign. The stock in the hands of the Butchers is very large, but they are firm at 9 1/2c.

**WOOL.**—There is not a very active business doing in this great staple, but a demand exists to a fair extent. Primes are not very well sustained, and in the Country a slight decline has been submitted to. It is estimated that the consumption of Wool would have been four or five million pounds greater in the New-England States, had not the drought stopped much of the machinery. The stock here is rather large. We quoted Saxony Fleeced 45c. @ 45c.; Full-blood Merino 40c. @ 43c.; half and three-quarter Merino 35c. @ 35c.; Native to quarter 25c. @ 30c.; Superfine, pulled, 36c. @ 40c. No. 1 do. 34c. @ 36c.; No. 2 do. 25c. @ 28c.

**CATTLE.**—BEVES.—The supply on the last market day was larger than for some time past, and prices in consequence declined a shade. Fourteen hundred and fifty head were offered, including 100 left over from the previous week. Twelve hundred head were disposed of at \$5 @ \$7, averaging \$5-75, being a decline of 25c. per 100 lbs. on the previous week. The average sales in the first of the month were at \$5-57 1/2. Cows and CALVES.—Sixty-five, mostly small and inferior, were at market, and fifty were taken at \$25 @ \$33 @ \$38 each. SHEEP and LAMBS.—There were upwards of 4,000 head brought to the stand, most of which were sold at \$1-40 @ \$1-60 for Sheep, and \$1 @ \$2-75 for Lambs, according to quality.

**HAY.**—There has been a fair supply, and the rate has been firm, with a tendency to advance. Loose, by the load, is selling at 91 @ 106c. per 100 lbs. In the early part of the month, the rate was \$1 1/4c. @ 100c. per 100 lbs.

**NEW MODE OF MAKING CHEESE.**—A Maine paper gives the following account of a new process of making cheese, which promises well where only one or two cows are kept, as it has been repeatedly tried with flattering success:—"The milk is set in the ordinary way every morning, and the curd is separated from the whey as well as it can be with the hands. It is then pressed compactly into the bottom of an earthen (or stone) pot, and covered over with several folds of dry linen or cotton cloth. By this process the remaining whey is absorbed, and when the cloth becomes saturated, it is removed and a dry one placed in its stead. In the course of a day and night the whey is removed as effectually as it could be done by pressing. The next morning the milk is prepared in the same manner, and the curd is packed closely upon the top of the prepared day previous, and the same method pursued in separating the moisture. This process is to be repeated till you have a cream pot full of cheese. The labor is much less than in the old method, and the care of it afterwards comparatively nothing."

**CORN OIL.**—A late number of the Niles (Michigan) Republican says,—"We have been burning in a common lamp, for the last few weeks, oil extracted from corn, a quantity of which we received from R. A. Ward, of Berrien, who manufactures the article. It gives a clear, beautiful light, and burns longer than the common whale oil, and emits no offensive smell. On the whole, we should think it better than any kind of oil for lamps." We hope this oil was not obtained from a distillery. We have seen oil so obtained that burned finely, but its production in this case was too intimately associated with woe and misery to afford pleasurable sensations. If the oil can be obtained from corn without this drawback, it would be a desideratum for the country.

**CURE FOR BURNS.**—An application of an ointment made of soap from the chimney, and oil, hogs' lard, or almost any fat is free from salt, is found to be one of the best remedies for burns. The soot should be of that kind which is pure and hard, and be thoroughly incorporated with the lard. If the burn is extensive, the management will be easier if the ointment is spread on strips of cloth, rather than a single piece. No application other than a renewal of this ointment will be necessary. We have known some bad cases cured with this preparation, and it should be generally known as a valuable medicine.

## Notices to Correspondents, &amp;c.

We acknowledge the receipt, during the last month, of communications from James M. Garnett, (dated in July,) Solon Robinson, S. W. Bartlett, Charles Starr, Jr., C. N. O., Sheldon Moore, A. Friend to Good Stock, J. W., J. M. Weeks, A. Huyck, A. Reader, S. Denison, C. N. Bement, O. Cardin, E. M., W. J. D., F. Minor, E. Link, M. E. Merwin, Joseph Coe, J. N. Keeler, John Lewis, A. Friend to Southern Planters, T. Hudson, Commentator, J. L. Bowman, J. B. Tillinghast, Richard Fisk, (dated in May,) D. F. Lott, J. Burrows, D. L. Dodge, Wm. Anderson, F. D. Huntington.

## Acknowledgments.

During the last month we have received, From Gao. C. THORNBURN, Esq., New-York, "The Journal of the Royal Agricultural Society of England, part II., vol. 2," and the last No. of "The British Farmer's Magazine," for which, as well as for many similar favors, Mr. Thornburn will please accept our thanks.

From DAYTON & SARTON, New-York, a new edition, just issued by them, of Prof. Hitchcock's "Elementary Geology, with an Introductory Notice, by Dr. John Fyfe Smith."

From WILEY & PUTNAM, publishers, New-York, the first American edition of "A Treatise on Sheep, with the best means for their improvement, General Treatment, and the Treatment of their Diseases, by Ambrose Blacklock."

From THOMAS AYLECK, the editor, a copy of "The Western Farmer and Gardener's Almanac, for 1842."

From WILLIAM BLUNTON, Esq., of Field Hall, Uttoxeter, England, copies of his Essays on "Steam Plowing," and on "Milking," for which he has our thanks.

"The Mark-Lane Express," London, from the editor and publisher, to whom we are indebted for the regular weekly numbers of that paper in exchange for the Cultivator.

From C. P. BOSSON, editor Yankee Farmer, Boston, "A Short and Simple Letter from a Conservative Beekeeper." For sale at his office in Boston, and by Geo. C. Thornburn, New-York—price 12 1/2 cents.

From JOHN TOWNSEND, Esq., of this city, half a dozen ears of Dutton Corn, raised on his farm near this city, at least equal to any we have ever seen.

From Wm. H. SOTHAM, Perch Lake Farm, samples of the Potato, mentioned in his letter in the last No. of the Cultivator.

From G. CHURCHILL, Esq., Ridge Prairie, Illinois, Seeds and Leaf of the wild White Hollyhock.

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